Lincolnshire
COUNTY COUNCIL
Working for a better future

County Offices
Newland
Lincoln
LN1 1YL

4 September 2023

Environment and Economy Scrutiny Committee

A meeting of the Environment and Economy Scrutiny Committee will be held on **Tuesday, 12 September 2023 at 10.00 am in the Council Chamber, County Offices, Newland, Lincoln LN1 1YL** for the transaction of the business set out on the attached Agenda.

Yours sincerely

Debbie Barnes OBE
Chief Executive

Membership of the Environment and Economy Scrutiny Committee (11 Members of the Council)

Councillors I D Carrington (Chairman), M A Griggs (Vice-Chairman), Mrs A M Austin, A J Baxter, M D Boles, K H Cooke, I G Fleetwood, A G Hagues, H Spratt, G J Taylor and L Wootten

ENVIRONMENT AND ECONOMY SCRUTINY COMMITTEE AGENDA
TUESDAY, 12 SEPTEMBER 2023

Item	Title	Pages
1	**Apologies for Absence/Replacement Members**	
2	**Declarations of Members' Interests**	
3	**Announcements by the Chairman, Executive Councillors and Lead Officers**	
4	**Minutes of the previous meeting held on 11 July 2023**	5 - 14
5	**Food Waste Disposal Contract Procurement** *(To receive a report by Mike Reed, Head of Waste, which invites the Committee to consider a report on the Food Waste Disposal Contract Procurement which is being presented to the Executive Councillor for Waste and Trading Standards for a decision between 18 and 22 September 2023. The views of the Scrutiny Committee will be reported to the Executive Councillor as part of his consideration of this item)*	15 - 24
6	**Approval to Procure Contracts for Haulage of Household Waste Recycling Centres Exit Waste Streams** *(To receive a report by Mike Reed, Head of Waste, which invites the Committee to consider a report to Procure Contracts for Haulage of Household Waste Recycling Centres Exit Waste Streams. This decision is due to be taken by the Executive Councillor for Waste and Recycling between 18 and 22 September 2023. The views of the Committee will be reported to the Executive Councillor as part of his consideration for this item)*	25 - 34
7	**Scrutiny Review Report: Town Centre Improvements** *(To consider a report by Councillor Phil Dilks, Chairman of Scrutiny Panel A, Vanessa Strange, Head of Infrastructure Development, and Kiara Chatziioannou, Scrutiny Officer and Panel Project Lead, on the findings and outcomes of Scrutiny Panel A: Town Centre Improvements Scrutiny Review. This decision is due to be considered by the Executive on 3 October 2023 and the views of the Committee will be reported to the Executive as part of its consideration of this item)*	35 - 144
8	**Energy Option Analysis for Greater Lincolnshire Final Report, Outcomes, and Next Steps** *(To consider a report by Vanessa Strange, Head of Infrastructure Development and Johanna Rhoades, Project Utilities Officer on the Energy Option Analysis for Greater Lincolnshire Final Report, Outcomes and Next Steps and to provide feedback on the next steps identified)*	145 - 276

Democratic Services Officer Contact Details	
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Please note: for more information about any of the following please contact the Democratic Services Officer responsible for servicing this meeting

- Business of the meeting
- Any special arrangements

Contact details set out above.

Please note: This meeting will be broadcast live on the internet and access can be sought by accessing Agenda for Environment and Economy Scrutiny Committee on Tuesday, 24th October, 2023, 10.00 am (moderngov.co.uk)

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https://www.lincolnshire.gov.uk/council-business/search-committee-records

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PRESENT: COUNCILLOR I D CARRINGTON (CHAIRMAN)

Councillors M A Griggs (Vice-Chairman), Mrs A M Austin, M D Boles, I G Fleetwood, A G Hagues, G J Taylor, L Wootten, R Wootten and P A Skinner

Councillor T Dyer was in attendance, and Councillors C Davie and D McNally attended remotely.

Officers in attendance:-

Stephen Brookes (Broadband Programme Manager), Justin Brown (Assistant Director - Growth), Kiara Chatziioannou (Scrutiny Officer), Thea Croxhall (Adult Learning and Skills Manager), Geoff Daley (Senior Commissioning Officer - Economic Development) Angela Driver (Enterprise Growth Officer), Samantha L Harrison (Head of Economic Development), Marianne Marshall (Strategic Communications Lead), Chris Miller (Head of Environment), Andrew Pickwell (Senior Definitive Map Officer – Environment), Mike Reed (Head of Waste), Jenny Riordan (Principal Officer for Learning and Skills – Economic Development), Vanessa Strange (Head of Infrastructure Investment), and Jess Wosser-Yates (Democratic Services Officer).

8   APOLOGIES FOR ABSENCE/REPLACEMENT MEMBERS

It was reported that under Regulation 13 of the Local Government Committee and Political Groups Regulation 1990, Councillor P Skinner was replacing Councillor H Spratt for this meeting only.

9   DECLARATIONS OF MEMBERS' INTERESTS

Councillor M Brookes declared an interest in relation to Item 5 as he was a Trustee of the Gainsborough Trinity Foundation which was noted in the report as an Adult Education Provider.

10   MINUTES OF THE PREVIOUS MEETING HELD ON 30 MAY 2023

RESOLVED

That the minutes of the previous meeting held on 30 May 2023 be approved and signed by the Chairman as a correct record.

11   ANNOUNCEMENTS BY THE CHAIRMAN, EXECUTIVE COUNCILLORS AND LEAD OFFICERS

Councillor C Davie, Executive Councillor for Economic Development, Environment and Planning, made the following announcements:

- Recent data indicated positive signs for Lincolnshire's economy; 72% of businesses supported by the Growth Hub reported that they felt confident in their current financial forecast.
- The effects of Lincolnshire's visitor economy were highly anticipated this summer, and new evidence showed that its impact on the Greater Lincolnshire economy increased by 28.9% compared to 2021.
- Lincolnshire County Council (LCC) received positive feedback from the Lincolnshire Show from local businesses, notably the work of Scrutiny Panel B on the challenges faced by the agricultural sector.
- LCC was currently supporting six tenants through the 'The Hub' innovation centre.
- The Boston Road Industrial Estate expansion scheme in Horncastle was at the outline design stage and was due to be considered by the Committee in Autumn.
- The reconfiguration of the Eventus Business Centre in Market Deeping was complete and offered lettable space for local businesses, with a 're-launch' event for the centre being held on 19th July.
- The introduction of new business support delivery under the Business Lincolnshire UK Shared Prosperity Fund (UKSPF) shared service programme was anticipated; assurance was provided that the service would utilise old contracts and personnel.
- Six Local Authorities had opted into UKSPF and had committed funding from their UKSPF allocations, which included City of Lincoln, North Kesteven, South Kesteven, West Lindsey, Rutland and North East Lincolnshire. It was noted that East Lindsey and South Holland had opted-out and were delivering a local business support solution, and a decision from North Lincolnshire was pending.

12   ADULT LEARNING PROVISION 2022-23 AND PLANS FOR THE 2023-24 ACADEMIC YEAR

The Committee received a report from Thea Croxall, Adult Learning and Skills Manager, which provided an overview of the activity delivered by the Adult Skills & Family Learning Service 2022-23. The following matters were reported:

- The flexible and accommodating approach of the subcontracted learning providers was demonstrated by a 99% satisfaction rate.
- LCC's Adult Skills and Family Learning Service provided high quality learning to a wide range of learners; it was reported that 6245 learners had been engaged with since August 2022 and the Adult Learning and Skills Manager praised the strong partnership working with learning subcontractors.

- The targets for male learners and learners with no/low qualifications were not met, although it was assured that these demographics were a key focus of both LCC and providers moving forward.
- The Adult Skills and Family Learning Performance Dashboard outlined the plan for delivery for 2023-2024 which primarily intended to support areas unable to be met by other funding provision.

During consideration of the report, the following points were highlighted:

- Members questioned why the number of available learning places and courses was significantly lower in North Kesteven and South Holland. It was expressed that this was to avoid funding duplication as many residents travelled out of these districts to education providers in Lincoln and Boston. Assurance was provided that dialogues remained consistent with these providers to ensure individuals in these areas had sufficient provision.
- It was noted that learner feedback methods could be improved upon to increase respondents to provide a more accurate evaluation of the service.
- Members praised the wide variety of courses available.
- The Committee praised the clarity of the report in demonstrating how specific categories of learners were analysed and had met targets.
- English for Speakers of Other Languages (ESOL) courses were available and adhered to the eligibility rules set by the Educational Skills and Funding Agency. Additional ESOL provision was now available in Boston and Lincoln, and LCC worked with partners to ensure a place was guaranteed on the course for everyone who enquired regarding enrolment.
- The Leaner Support Fund was available to remove barriers to participation in education, such as travel, childcare and learning resources.
- Members raised questions regarding the relationship between the employability, skills and wellbeing programmes. The Adult Learning and Skills Manager clarified that the employability and skills programmes helped people enter employment or progress within their role; alternatively, wellbeing programs provided engagement activities for those requiring additional support to progress onto another course following completion. Several courses focused on improving outcomes for families, which involved learning programs, targeting parents with little/no qualifications and supporting adults to learn alongside their children.

RESOLVED

1. That the Committee records its thanks to the Adult Learning and Skills Manager and the Adult Skills and Family Learning Service Team in delivering the programme.
2. That the report be endorsed, and that the Committee's satisfaction be recorded on activity undertaken and reported for the 2022/2023 academic year.
3. That any additional comments in relation to areas for consideration in meeting the needs of businesses and constituents at District County level, as captured, are used to inform the 2023/2024 programme planning activities.

13   BUSINESS LINCOLNSHIRE GROWTH HUB ANNUAL PERFORMANCE AND FUTURE
        BUSINESS LANDSCAPE

The Committee received a report from Angela Driver, Enterprise Growth Manager – Economic Development, which provided an update on the Annual Performance of the Growth Hub in 2022, and the future for business support initiatives. The following matters were reported:

- The end of the European Regional Development Fund (ERDF) in June had facilitated a new era in business support.
- A new support programme was developed under the UK Shared Prosperity Fund (UKSPF) which was commissioned until March 2025.
- The existing model of business support was replaced by a universal shared service; six out of ten Authorities in the Greater Lincolnshire Local Enterprise Partnership (LEP) had opted into this new service. Boston Borough, East Lindsey and South Holland had decided to deliver a local advisory service. It was assured the Growth Hub would continue to support all Local Authorities to ensure the overall future prosperity of Lincolnshire businesses.
- It was highlighted that the ERDF had facilitated significant access to grant funding for businesses. Moving forward, generic grants would reduce under UKSPF therefore authorities were considering small, specific, and geographically focused grant schemes.
- Members were assured that additional financial support for businesses was available due to the successful bidding of the Business Lincolnshire (BL) Team such as the 'East Midlands Made Smarter' and the 'Create Growth' programmes. It was noted that the Team would continue to bid on possible funding streams in the future.

During consideration of the item, the following points were noted:

- Members questioned how information sharing between LCC and District Councils (DCs) that opted out of UKSPF would continue. The Enterprise Growth Manager assured that the Council planned to work with colleagues in the South East Lincolnshire Partnership to exchange information, and it was highlighted that the BL website offered support to all businesses, regardless of location.
- Officers expressed that the DCs that opted out of UKSPF prioritised a more local solution to funding. Further information was anticipated, however it was known these Districts would be commissioning additional services for international trade.
- The breadth of support offered by BL was contracted by the government; The Growth Hub Service was required to support businesses through start up, growth and scale.
- It was suggested whether business engagement could increase, particularly through social media. The Enterprise Growth Manager informed Members that many tools were utilised to attract businesses, and provided assurance that UKSPF would bring further engagement. Additionally, the Head of Economic Development informed that the LCC and Local Enterprise Partnership (LEP) social media accounts were used to promote BL and increase traction.

- The Committee requested that future reports included engagement data on social media such as Retweets, shares and views on social media.
- It was requested that reports on the performance of the three DCs that opted out of UKSPF, and the six districts supported by the programme were regularly bought to the Committee for consideration.
- The Enterprise Growth Manager assured the Economic Development (ED) Team was heavily involved in planning UKPSF application through regular meetings with fellow ED Officers in DCs, especially West Lindsey.
- UKSPF had a broader programme of support than the ERDF as it included community-based funding schemes which were not directly involved with economic development; The Enterprise Growth Manager accepted that UKSPF had a wider remit whereas the ERDF had more guidance and limitations.
- The Executive Councillor for Economic Development, Environment and Planning highlighted the importance of having an embedded, long-term business support plan as UKSPF only was commissioned until 2025, and the General Election could see a change in government policy.
- BL had to propose a significant business plan for UKSPF which was considered by all ten Local Authorities in Lincolnshire.
- The South East Lincolnshire Partnership would support 25% businesses that BL was currently supporting.
- An application for BL had been submitted as per the UKSPF process however no feedback was received.

RESOLVED

1. That the Committee thanks Officers and that their satisfaction with the Growth Hub's consistent performance be recorded.
2. That the report be endorsed, and that the Committee notes the impact of support offered to businesses.
3. That the Committee Members continue to exhibit their support through their business networks.

14   BROADBAND PROGRAMME - INTERIM UPDATE

The Committee received a report from Stephen Brookes, Broadband Programme Manager, which provided an interim update on the Broadband Programme in Lincolnshire, the following matters were reported:

- The contract between LCC, Building Digital UK (BDUK) and Quickline would deliver Ultrafast broadband to 4,900 premises in rural areas between December 2023 and 31 March 2024.
- Project Gigabit was a government BDUK project that delivered broadband in rural areas that were non-commercially viable to existing providers; in Lincolnshire this concerned

two 'Lots' – Lots 10 and 23. It was assured the Broadband Team would work in partnership with BDUK to deliver both contracts.

- o Lot 10 concerned 13,600 eligible premises and went to tender in May 2023
- o Lot 23 was being finalised, and details of interest suppliers from BDUK was anticipated. Currently, there were 75,3000 eligible premises in Lincolnshire for Lot 23.

- Additional funding was available under an agreed contractual Change Control to provide broadband to areas that Project Gigabit could not cover.
- 220,000 premises were expected to be upgraded by the end of 2025.
- Project GigaHub was a BDUK-funded project which delivered full fibre connectivity to publicly owned rural buildings such as schools, doctor's surgeries and emergency services stations.
- The Team had identified 185 potential sites for Project GigaHub and their Tender documents were approved by BDUK for procurement, although it was noted BDUK would only offer provision to 62 sites as those sites removed were likely to be covered by Project Gigabit. The team had highlighted that project GigaHub would provide guaranteed connectivity more quickly than Project Gigabit.
- Quickline was engaged in activities across Lincolnshire and would deploy full fibre to over 7000 sites this year.
- Netomnia was also supporting broadband provision in the county.
- Openreach were working with BDUK on a rural gigabit voucher scheme.
- The Broadband Team were liaising with BDUK to consider any areas not covered by Project Gigabit through utilising BDUK vouchers, and a voucher top up scheme was anticipated to offer upgrades to more remote areas in Lincolnshire.

During consideration of the report, the following matters were noted:

- Members highlighted locations Lincolnshire with no internet access; the Broadband Programme Manager acknowledged comments and assured the county benchmarked well in terms of connectivity and noted that Project Gigabit should address concerns.
- Members were encouraged to contact the Broadband Programme Manager regarding areas with no access to internet.
- It was questioned whether the various broadband programmes would cover areas that were previously addressed by the 100Mb project. It was noted the commercial sector ran where 100Mb existed meaning rural areas were not addressed previously.
- The programmes attempted to stop the prioritisation of the commercial sector in securing internet access.
- Members noted that the east of Lincolnshire was particularly struggling to access broadband; the Broadband Programme Manager informed the Committee that 42% of the total expenditure for the first broadband contract was deployed to East Lindsey. The Team was very active in this area of the county and assurance was provided that East Lincolnshire was a considerable focus of broadband programmes.

- Concern was raised regarding 5g technology, and the broadband programme manager assured that this technology was in the non-ionizing radiation band meaning it was not dangerous.
- The Assistant Director of Growth highlighted issues that affected the broadband strategy; the government's broadband policy was highly regulated meaning LCC could only intervene in areas where the government knew the private sector would not provide provision, and noted that if projects were delayed, he would appreciate the support of the Committee to appeal against this to accelerate projects. The scale of broadband service and the rurality of Lincolnshire also impacted the strategy.
- It was noted that Members had received complimentary feedback on the Broadband Manager and his team from commercial investment operators.
- Members raised issues surrounding commercial operators leaving roads in an unfit state following utility works; the Broadband Programme Manager aknowledged this was a re-occurring issue. He noted there could be value in senior staff from various organisations to address this issue before works began on Project Gigabit.
- It was noted that phone signal was sub-optimal in some areas in Lincolnshire. The Broadband Programme Manager informed the Committee that a shared rural network was facilitating providers to build additional telecom masts in rural areas, however signal was analysed by population, not area, which meant that there was a gap in signal provision in rural areas.

RESOLVED

1. That the Member's thanks to the Broadband Programme Manager for his swift response to the request made by the Committee for interim information on this topic be noted.
2. That the report be received and that comments from the discussion in relation to this item, as captured, be shared with Leading Officers and Portfolio Holders for their consideration.

15   SERVICE LEVEL PERFORMANCE REPORTING AGAINST THE CORPORATE PERFORMANCE FRAMEWORK 2022-2023 - QUARTER 4

Samantha Harrison, Head of Economic Development, Chris Miller, Head of Environment, and Mike Reed, Head of Waste presented reports on the performance of the Service Level Performance measures for 2022-23 Quarter 4 for Economy, Flooding and Waste which are within remit of the Environment and Economy Scrutiny Committee. The following matters were reported:

Economy
- 2527 businesses were supported by the Council which exceeded the target of 1,353. This was attributed to the ERDF closing, multiple successful flagship events, and the securing of Create Growth and Make Smarter national funding.
- 1523 qualifications were received by adults which exceeded the target of 1,400.

- £13,522,460 of external funding was attracted to Lincolnshire, which fell below the target of £17,525,673. This was due to the conclusion of the ERDF and changes to government funding, consequently the Head of Economic Development and the Executive Councillor for Economic Development and Planning agreed to reduce this target to £14,000.000.

Flood:
- 19 properties were protected from flooding which fell below the target of 60; these properties were high-risk, and it was assured that various proposed schemes were in development and would offer protection to over 60 properties – specifically in Long Bennington and Cherry Willingham.
- A range of schemes were being developed which focused on reflecting vulnerability and risk to flooding.
- 3 Section 19 investigations had been initiated this quarter due to a dry period in weather.

Waste
- Household waste collected was low which was welcomed given that waste minimization was the highest focus of the waste hierarchy.
- Recycling waste across all waste streams was around 40% and had increased by around 3% from last quarter; analysis was ongoing regarding the trends observed.
- Recycling at County Council owned Household Waste Recycling Centres (HWRCs) had increased from 69% to 73%.
- Household waste to landfill was 3.1%, which fell below the target of 5% which was welcomed as waste in landfill was avoided.
- Members were reminded that the KPIs did not reflect the performance of LCC Waste colleagues, but rather helped to identify trends and patterns in public behaviour.
- The finalised detail of the Environment Act was anticipated from the Department for Environment, Farming and Rural Affairs (DEFRA) as it could involve drastic changes to implement alongside Waste Collection partners.

During consideration of the reports, the following was noted:

Economy

- Members welcomed the inclusion of the locations of businesses supported by LCC in the report.
- It was questioned why only 1.1% of businesses in Boston were supported by LCC, and the Head of Economic Development expressed that these businesses accessed support from Cambridge and Peterborough. This was similar for businesses in North and North East Lincolnshire who received support from Hull and Humber. Members subsequently requested information on these businesses in Boston supported by Cambridge and Peterborough.
- The significance of switching from ERDF to other portfolio funding was noted.
- The reduction of the external funding attracted in Lincolnshire target was accepted by Members.

Flood
- Members requested an update on LCC's work to protect properties from groundwater flooding, specifically information regarding anticipated government funding; the Head of Environment highlighted that LCC had secured significant funding for a groundwater project for Lincolnshire and an update would be provided for the Committee for their consideration.
- Upon request, the Head of Environment agreed to circulate information regarding properties who had been protected and where flooding has re-occurred, although he assured he was not aware of any instances of this taking place.

Waste:
- Members welcomed the inclusion of the waste hierarchy in the report.
- The Committee praised that only 3.1% of waste went to landfill.
- Residents had informed Members that they were being turned away from waste centres; the Head of Waste clarified that there were performance difficulties with the haulage contractor which led the Waste Team to work with local haulage providers. Furthermore, it was noted that there would always be isolated, unavoidable issues but it was assured public engagement would continue.
- Clarity was sought regarding the separate agreement for accepting residual waste when the Energy from Waste Plant was not operational. Members were informed that the Plant closed for 2 weeks annually, and other emergencies caused unexpected closures. In these instances, LCC relied on landfill once the energy bunker was full. Alternatively, waste could be diverted to a different Energy from Waste facilities to prevent these materials from going to landfill.
- Concern was raised regarding the introduction of twin stream collection of paper and card in South Kesteven as some residents had limited capacity for an additional bin. Engagement was ongoing with DCs and residents effected, and in these cases bags were issued to collect the paper and card. Additionally, Officers had surveyed premises where it would not be feasible to have another bin, but this figure was low.
- Members who lived in areas that had implemented the twin stream paper and card collection assured colleagues heavily engaged with residents during the process.
- It was considered whether HWRCs could alternate the days they are closed would reduce fly-tipping. The Head of Waste noted that staggering closure dates was considered, but there was a concern that this would cause further confusion long-term. There was no link identified between fly-tipping and access to HWRCs and it was noted it would not be economically viable for HWRCs to remain open all week.

RESOLVED

1. That the Member's thanks to Officers for their detailed presentation and clarifications offered in relation to each area's respective performance be noted.
2. That the report be received, and the Committee's satisfaction is recorded on the assurances provided around measures that did not meet their targets.
3. That the comments from the discussion in relation to this item, as captured, be shared with Leading Officers and Portfolio Holders for their consideration.

10
ENVIRONMENT AND ECONOMY SCRUTINY COMMITTEE
11 JULY 2023

16   ENVIRONMENT AND ECONOMY SCRUTINY COMMITTEE WORK PROGRAMME

Consideration was given to a report by Kiara Chatziioannou, Scrutiny Officer, which invited the Committee to consider and comment on the content of its own work programme for the year to ensure that scrutiny activity was focused where it could be of greatest benefit.

RESOLVED

    That the proposed work programme approved.

The meeting closed at 12.37 pm

Open Report on behalf of Andy Gutherson, Executive Director - Place

Report to:	**Environment and Economy Scrutiny Committee**
Date:	**12 September 2023**
Subject:	**Food Waste Disposal Contract Procurement**

Summary:

This item invites the Environment and Economy Scrutiny Committee to consider a report regarding the Food Waste Disposal Contract Procurement.

This decision is due to be considered by the Executive Councillor for Waste and Trading Standards between the 18 and 22 September 2023. The views of the Scrutiny Committee will be reported to the Executive Councillor as part of his consideration of this item.

Actions Required:

That the Environment and Economy Scrutiny Committee: -

(1) considers the attached report and determines whether the Committee supports the recommendations to the Executive Councillor for Waste and Trading Standards as set out in the report.

(2) agrees any additional comments to be passed on to the Executive Councillor in relation to this item.

1. Background

The Executive Councillor for Waste and Trading Standards is due to consider the Food Waste Disposal Contract Procurement report between the 18 and 22 September 2023. The full report to the Executive Councillor is attached at Appendix A to this report.

2. Conclusion

Following consideration of the attached report, the Committee is requested to consider whether it supports the recommendations in the report and whether it wishes to make

any additional comments to the Executive Councillor for Waste and Trading Standards. Comments from the Committee will be reported to the Executive Councillor.

3. Consultation

The Environment and Economy Scrutiny Committee is being consulted on the proposed decision of the Executive Councillor for Waste and Trading Standards which will be considered between the 18 and 22 September 2023.

4. Appendices

These are listed below and attached at the back of the report	
Appendix A	Report to the Executive Councillor for Waste and Trading Standards on Food Waste Disposal Contract Procurement.

5. Background Papers

No background papers within the meaning of section 100D of the Local Government Act 1972 were used in the preparation of this Report.

This report was written by Mike Reed, Head of Waste, who can be contacted via email at mike.reed@lincolnshire.gov.uk.

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Open Report on behalf of Andy Gutherson, Executive Director - Place	

Report to:	**Councillor D McNally, Executive Councillor for Waste and Trading Standards**
Date:	**18 - 22 September 2023**
Subject:	**Food Waste Disposal Contract Procurement**
Decision Reference:	**I029446**
Key decision?	**Yes**

Summary:

This Report seeks approval to procure a contract for the treatment of food waste via anaerobic digestion, including collection from waste transfer stations by the supplier.

Recommendation(s):

That the Executive Councillor for Waste and Trading Standards:

(1) approves the procurement via the competitive procedure with negotiation of a new contract to take effect from 1 April 2025 for the collection of food waste from waste transfer stations and its subsequent treatment.

(2) Delegates to the Executive Director – Place in consultation with the Executive Councillor for Waste and Trading Standards authority to take all decisions necessary to progress the procurement and to approve the final form and entering into of the new Food Waste Disposal Contract.

Alternatives Considered:

1. **Not Proceeding and Awarding a Contract**

   The Council is obligated to procure services of the value of these services according to the Public Contract Regulations 2015.

   From 1st April 2025, the government has proposed all local authorities separately collect and dispose of municipal food waste on a weekly basis. Defra have confirmed that failure to implement separate food waste collections and disposal could result in the Council incurring financial penalties, although Defra have yet to confirm and quantify what any penalties are likely to be. This contract will ensure that the Council avoids receiving penalties, whilst safeguarding the

reputation of the council.

Due to the limited food waste processing capacity in the market, and Local Authorities competing to secure capacity to the same fixed deadline, delaying the procurement will likely result in less competitive rates for processing and haulage. In addition, if capacity in Lincolnshire and surrounding areas is no longer available, higher haulage costs will be incurred by the Council due to material being hauled over longer distances.

2. **Open Procedure**

The open tender route would allow the Council to get to the market before other contracting authorities which should result in advantageous pricing and security of necessary capacity in good time for the 2025 commencement of food waste collections to allow for the district councils to plan their collection regimes. The open tender process is a one stage process that is for procurements that are generally simplistic in nature, but does not permit the Council to negotiate with bidders. Due to some of the commercial aspects of the contract not being fully known, a competitive procedure with negotiation would give the Council the opportunity to discuss changes with bidders to achieve the aims of the contract and improve value for money, which the open procedure does not allow.

Reasons for Recommendation:

The proposed contract will ensure that the Council is in a position to comply with its legal obligations in relation to the treatment of food waste and thereby avoid receiving penalties, whilst safeguarding the reputation of the council.

The course of action proposed is the Competitive Procedure with Negotiation (CPN) which is compliant with the Public Contract Regulations. The CPN procedure will allow the Council to secure capacity with a provider to treat food waste, and negotiate with bidders during the tender process to discuss and agree changes to the requirements so that the objectives of the contract can be met and value for money improved. The contract will not grant exclusivity to the food treatment provider, or guarantee minimum tonnages, which will ensure the Council has the flexibility to take advantage of technological advances in alternative food treatment methods should they become available.

1. Background

1.1 Context

Pursuant to the Environment Act 2021, the government has proposed all local authorities separately collect and dispose of food waste on a weekly basis from April 2025. Lincolnshire County Council will be placed with a statutory duty to dispose of 35,000 tonnes of municipal food waste per annum. The relevant section in the Environment Act 2021 is yet to be commenced, and final details of what will be mandated and what

implications there will be for a failure to comply with the legislation are yet to be finalised and communicated by Defra. A failure to implement the changes is likely to incur financial penalties. The proposed contract will enable the Council to meet its statutory requirements to dispose of food as a separate waste stream, ensuring that financial penalties are not incurred whilst safeguarding the reputation of the Council.

As a result of these changes food waste will have to be diverted from the Energy from Waste (EfW) facility to a treatment facility. The Council does not currently manage the separate disposal of municipal food waste collected by the District Councils, as food waste is currently incinerated along with general household waste via the Energy from Waste Facility (EfW). Therefore, the Council will require a new contract to be in place to secure food waste treatment capacity by April 2025 at the earliest.

Anaerobic Digestion (AD) is currently the leading disposal technology for municipal food waste and market engagement has informed the Council that is this the most effective tried and tested technology for large volumes of food waste. As such the intention is to specify this treatment method. In order to open up the possibility of alternative treatments arising from rapid technological change the Council will not grant exclusivity or guarantee any volumes of material.

There are a limited numbers of facilities and limited capacity available in Lincolnshire and surrounding areas for AD treatment. Market engagement has established that there is one provider who is intending to extend their existing facility and increase capacity, and there are other providers who have indicated that they are proposing facilities within Lincolnshire which are at the planning and permits stage. Whilst this does not represent actual capacity at present, additional capacity may arise within the County before the Council is required to commence food waste disposal. However it should be noted that there is no guarantee that this additional capacity will be available or that any or all of the known planning and licencing consents will be obtained.

Engagement with the market suggests that the Council's food waste is attractive to AD providers because its composition optimises the AD process. Although market engagement has identified that currently there is adequate existing treatment capacity established within Lincolnshire which meets the Council's needs, this does not significantly exceed the Councils own capacity requirements. The concern is that other local authorities may target the established AD treatment capacity in Lincolnshire and surrounding areas if the Council does not move quickly to secure capacity. Private sector companies within food manufacturing also dispose of food waste via AD treatment, and any additional demands from the commercial sector could increase competition for securing available capacity. If there are delays and the capacity cannot be secured, and additional capacity does not become available, then it is likely that the material may have to be hauled to facilities over longer distances, resulting in higher haulage costs.

Food waste will be segregated by households and placed in caddies, which will be collected at the kerbside by the District Councils and delivered to the Waste Transfer Station (WTS). District Councils will have to procure extra collection vehicles and containers and may not be in a position to deliver food waste to the WTS by April 2025. Therefore, the Council may not need access to the AD facility for some time after that but provision has to be guaranteed from that point and there will have to be a provision in the contract requiring the operator to make available to the Council the required capacity

from a date specified by the Council. The date will be triggered on reasonable notice which the Council considers to be acceptable to the market.

Market engagement has established that most AD treatment providers are capable of handling haulage from the WTS to the treatment facility and as such haulage will be included in the contract. The AD supplier has an economic interest in ensuring a continual flow of material through their facility which is aligned with the Council's goals of minimising volumes of food waste within the WTS, and therefore the contract will specify that collections from the WTS will be made by the supplier on each working day.

Industry indices for the value of material achieved by buyers of AD services for 2023 suggest that the Council may receive an income for the material (by contrast with a net cost for MDR and residual waste disposal). In addition, this material will be no longer be comingled with residual waste which is costly to dispose of at £99 per tonne. As such it is likely this scheme will result in a net financial benefit to the Council.

It is the intention that the Council will award to one supplier rather than to multiple suppliers on the basis of lots in order to achieve economies of scale and maximise the attractiveness of the Council's requirement and increase confidence that the facilities would be operational by March 2025. The decision not to provide exclusivity or guarantee tonnages will be useful if it becomes beneficial to revise this arrangement within the contract term for example if a new facility comes online within or near to Lincolnshire.

The proposed term of the contract will be five years with an option to extend for a further two periods of two years providing a maximum contract term of 9 years. Market engagement suggest this term is sufficiently long to be attractive to established AD operators and fits in with their vehicle replacement programmes.

This contract will contribute to a number of the Council's corporate objectives including: increasing the Council's recycling rate (estimated 7% increase); increasing the amount of household waste collected; reducing the amount of household waste diverted to landfill and reducing the Council's CO_2 emissions.

1.2 Procurement Process

The Competitive Procedure with Negotiation (CPN) is to be used to procure AD Waste treatment services. A CPN permits the Council to enter into dialogue with providers to seek improvements to the delivery of the service and costs associated with nominated areas of the Contract. As this is a new requirement and there are some elements that are not fully known to the Council, negotiation with providers may be beneficial. The potential areas that the Council may discuss with bidders to support the aims of the contract and deliver increased value for money are as follows:

- Contracting arrangements – opportunities to increase market resilience, improved processing capacity and value for money;
- Operational arrangements – to discuss opportunities to change the Councils operational arrangements such as changes to the specification or practices that may be adopted to increase value for money and support the aims of the Contract;
- Target / non-target fractions;
- Payment mechanism;

- Income generation;

- Contract terms – changes to commercial elements including but not limited to limits of liabilities, insurance levels and indemnities;

- Key Performance Indicators – changes to the performance management framework, for example minimum or target service levels in relation to the collection or storage of waste that might bring about operational or price benefits.

This procurement route should allow the Council to get to the market before other contracting authorities and therefore result in advantageous pricing and security of necessary capacity in good time for the 2025 commencement of food waste collections to allow for the district councils to plan their collection regimes.

Bidders will be required to declare that they are capable of receiving and treating municipal food waste, including caddy liners, at their own fully licensed / permitted treatment facility. Bids from providers who do not have current capacity will not be accepted by the Council as this will bring added risk to securing adequate capacity for when the Contract goes live or when the Council gives notice to commence collections and treatment.

The award Criteria will have greater focus on quality, with a weighting of 60%, with price being assessed with a weighting of 40%. This is likely to provide a good balance of cost and quality of service.

2. Legal Issues:

Public Services Social Value Act
In January 2013, the Public Services (Social Value) Act 2013 came into force. Under the Act the Council must before starting the process of procuring a contract for services consider two things. Firstly, how what is proposed to be procured might improve the economic social and environmental wellbeing of its area. Secondly, how in conducting the process of procurement it might act with a view to securing that improvement. The Council must only consider matters that are relevant to the services being procured and must consider the extent to which it is proportionate in all the circumstances to take those matters into account. In considering this issue the Council must be aware that it remains bound by the Public Contracts Regulations 2015 which itself through its requirement for transparency, fairness and non-discrimination places limits on what can be done to achieve these outcomes through a procurement.

The food waste treatment service contributes to the environmental wellbeing of the area by contributing to the effective treatment and disposal of household waste.

Ways will be explored of securing social value through the way the procurement is structured. The use of the competitive procedure with negotiation allows the Council to discuss directly with suppliers how the contract may be used to deliver social value.

Under section 1(7) of the Public Services (Social Value) Act 2013 the Council must consider whether to undertake any consultation as to the matters referred to above. The service

and the value it delivers is well understood. This and the market engagement carried out is considered to be sufficient to inform the procurement. It is unlikely that any wider consultation would be proportionate to the scope of the procurement.

Equality Act 2010
Under section 149 of the Equality Act 2010, the Council must, in the exercise of its functions, have due regard to the need to:

- Eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under the Act.
- Advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it.
- Foster good relations between persons who share a relevant protected characteristic and persons who do not share it.

The relevant protected characteristics are age; disability; gender reassignment; pregnancy and maternity; race; religion or belief; sex; and sexual orientation.

Having due regard to the need to advance equality of opportunity involves having due regard, in particular, to the need to:

- Remove or minimise disadvantages suffered by persons who share a relevant protected characteristic that are connected to that characteristic.
- Take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it.
- Encourage persons who share a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low.

The steps involved in meeting the needs of disabled persons that are different from the needs of persons who are not disabled include, in particular, steps to take account of disabled persons' disabilities.

Having due regard to the need to foster good relations between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to tackle prejudice, and promote understanding.

Compliance with the duties in section 149 may involve treating some persons more favourably than others.

The duty cannot be delegated and must be discharged by the decision-maker. To discharge the statutory duty the decision-maker must analyse all the relevant material with the specific statutory obligations in mind. If a risk of adverse impact is identified consideration must be given to measures to avoid that impact as part of the decision-making process.

The Equality Act 2010 has been considered, and the decision is not considered to have any implications for people with a protected characteristic.

Joint Strategic Needs Assessment (JSNA and the Joint Health and Wellbeing Strategy (JHWS)

The Council must have regard to the Joint Strategic Needs Assessment (JSNA) and the Joint Health and Wellbeing Strategy (JHWS) in coming to a decision.

The decision is not considered to have any implications for the Joint Strategic Needs Assessment (JSNA) and Joint Health and Wellbeing Strategy (JHWS).

Crime and Disorder

Under section 17 of the Crime and Disorder Act 1998, the Council must exercise its various functions with due regard to the likely effect of the exercise of those functions on, and the need to do all that it reasonably can to prevent crime and disorder in its area (including anti-social and other behaviour adversely affecting the local environment), the misuse of drugs, alcohol and other substances in its area and re-offending in its area.

The decision is not considered to have any implications for the section 17 matters.

3. Conclusion

A Competitive Procedure with Negotiation (CPN) will allow a compliant procurement process that will give the opportunity for the Council to enter dialogue with bidders to discuss and negotiate operational and commercial factors to make changes to the initial requirements that will support the aims of the contract and may increase value for money.

This route to market, and delegating authority to seek tenders and award the Contract will ensure that the Council can quickly secure capacity in the market to meet its statutory obligations, and securing the most advantageous commercial outcomes.

4. Legal Comments:

The Council has the power to procure and enter into the contracts proposed.

The procurement of a new contract using the competitive procedure with negotiation is compliant with the Council's procurement obligations.

The decision is consistent with the Policy Framework and within the remit of the Executive Councillor

5. Resource Comments:

Cost pressures or savings from these changes to contracts is expected to be managed within the wider Waste Management revenue budget.

6. Consultation

a) Has Local Member Been Consulted?

Yes

b) Has Executive Councillor Been Consulted?

Yes

c) Scrutiny Comments

The decision will be considered by the Environment and Economy Scrutiny Committee at its meeting on 12 September 2023 and the comments of the Committee will be reported to the Executive Councillor.

d) Risks and Impact Analysis

See the body of the Report

7. Background Papers

No background papers within Section 100D of the Local Government Act 1972 were used in the preparation of this report.

This report was written by Paul Beales and Mike Reed, who can be contacted on
paul.beales@lincolnshire.gov.uk or mike.reed@lincolnshire.gov.uk

Open Report on behalf of Andy Gutherson - Executive Director for Place

Report to:	**Environment and Economy Scrutiny Committee**
Date:	**12 September 2023**
Subject:	**Approval to Procure Contracts for Haulage of Household Waste Recycling Centres Exit Waste Streams**

Summary:

This item invites the Environment and Economy Scrutiny Committee to consider a report regarding the Approval to Procure Contracts for Haulage of Household Waste Recycling Centres Exit Waste Streams.

This decision is due to be considered by the Executive Councillor for Waste and Trading Standards between the 18 – 22 September 2023. The views of the Scrutiny Committee will be reported to the Executive Councillor as part of his consideration of this item.

Actions Required:

That the Environment and Economy Scrutiny Committee: -

(1) considers the attached report and determines whether the Committee supports the recommendations to the Executive Councillor for Waste and Trading Standards as set out in the report.

(2) agrees any additional comments to be passed on to the Executive Councillor in relation to this item.

1. Background

The Executive Councillor for Waste and Trading Standards is due to consider the Approval to Procure Contracts for Haulage of Household Waste Recycling Centres Exit Waste Streams report between the 18 – 22 September 2023. The full report to the Executive Councillor is attached at Appendix A to this report.

2. Conclusion

Following consideration of the attached report, the Committee is requested to consider whether it supports the recommendations in the report and whether it wishes to make any additional comments to the Executive Councillor for Waste and Trading Standards. Comments from the Committee will be reported to the Executive Councillor.

3. Consultation

The Environment and Economy Scrutiny Committee is being consulted on the proposed decision of the Executive Councillor for Waste and Trading Standards which will be considered between the 18 – 22 September 2023.

4. Appendices

These are listed below and attached at the back of the report	
Appendix A	Report to the Executive Councillor for Waste and Trading Standards on Approval to Procure Contracts for Haulage of Household Waste Recycling Centres Exit Waste Streams.

5. Background Papers

No background papers within the meaning of section 100D of the Local Government Act 1972 were used in the preparation of this Report.

This report was written by Mike Reed, Head of Waste, who can be contacted via email at mike.reed@lincolnshire.gov.uk.

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Open Report on behalf of Andy Gutherson, Executive Director - Place	

Report to:	**Councillor D McNally, Executive Councillor for Waste and Trading Standards**
Date:	**14 - 20 September 2023**
Subject:	**Approval to procure contracts for Haulage of Household Waste Recycling Centres Exit Waste Streams**
Decision Reference:	**I030180**
Key decision?	**Yes**

Summary:

The Council's Haulage of Household Waste Recycling contract is due to expire on the 31 March 2024. This report sets out a proposed course of action for the procurement of new contracts on a lots basis, and delegation of the necessary decisions.

Recommendation(s):

That the Executive Councillor for Waste and Trading Standards:

1. approves the procurement via the open tender procedure of new contracts for the provision of haulage of household waste recycling centres (HWRC) exit waste streams with effect from 1 April 2024.

2. delegates to the Executive Director - Place in consultation with the Executive Councillor for Waste and Trading Standards authority to determine the final form of and the entering into of the new contracts referred to in paragraph 1 above and the arrangements for securing continuity of services under 2 above.

Alternatives Considered:

1. **Not Awarding the Contract**

    The Council is obligated to procure services of the value of these services according to the Public Contract Regulations 2015.

    The Council has a statutory duty under the Environmental Protection Act 1990 to dispose of waste materials deposited by Lincolnshire residents at HWRCs. The haulage of the exit waste streams is necessary for HWRC material to be transferred to various disposal points where the waste is then treated.

Failing to award corporate contracts would see an increase in off contract spend. Multiple arrangements in place with suppliers without a contractual performance framework would adversely impact on the reliability of the service resulting in reputational risk to the Council, and additional work for officers.

Reasons for Recommendation:

The course of action proposed is compliant with the Public Contract Regulations (PCRs) 2015 and is the most efficient route to procurement that is available to the Council. The Council needs surety of supply of these vital services to minimise disruption to the public and to meet its statutory obligations. The Council also needs to ensure a seamless transition with no disruption to a vital service should new providers be awarded the contracts.

1. Background

1.1 Context

Lincolnshire County Council has a statutory duty to dispose of exit waste stream materials deposited by Lincolnshire residents at its eleven Household Waste Recycling Centres (HWRCs).

The Council discharges this duty by hauling materials away from HWRCs to various disposal points around the County where the materials are then treated accordingly and removed from the waste stream.

Between 1st April 2022 and 31st March 2023, the Council has spent £831,000 on haulage of exit waste streams from HWRCs to disposal points. In the first six years of the current contract, since commencement in 2017, spend has totalled c£5m.

The Council's current contract for haulage of HWRC exit waste streams with Biffa Waste Services expires on 31st March 2024 with no further options to extend. The contract was procured via open tender, and was awarded to Glazewing Ltd, and later transferred to Biffa Waste Services in 2019, and the contract was novated accordingly.

The incumbent supplier has not always delivered to the contract and the collection plan, predominantly due to driver vacancies, and the difficulty to recruit due to a shortage of drivers in the job market both regionally and nationally.

When waste streams are not collected on time this can have an adverse effect at the HWRC and can result in the Council being unable to accept affected waste streams from the public, or in a worst case scenario, could result in the HWRC closing to the public until the waste backlog has been cleared. When collections are missed or declined, the waste team has to source alternative suppliers which is not an efficient use of staff time, and off-contract haulage rates tend to be higher than contracted rates.

For the re-procurement the intention is to award to multiple suppliers, with four lots to be awarded, comprising of two or three HWRCs per lot. HWRCs are to be allocated to lots within geographical areas, with HWRCs with low levels of demand being grouped with

higher demand sites where possible. Bidders will be permitted to tender for all lots, with lots awarded capped at a maximum of two lots per bidder. Each lot will be awarded to one supplier. This will result in overall demand being shared, sufficiency and efficient use of vehicles, improved resilience, and the collection plan delivered to schedule.

Pre-market engagement indicates that suppliers in the market welcome contracting on the basis of lots. Lotting the contract may encourage small and medium sized local suppliers as well as larger organisations to participate in the tender and could result in the Council increasing its local supply base.

The intended contract term is a period of 5 years with the option to extend for a further two periods of up 12 months each, a maximum of 7 years. Pre-market engagement has identified that suppliers will need to purchase new vehicles to service the contract. A duration of 5 to 7 years will enable suppliers to recover vehicle capital costs over the life of the contract, keeping costs down for the Council. A shorter contract duration is likely to result in higher rates per collection, therefore a longer duration will benefit the Council.

This contract will contribute to a number of the Council's corporate objectives including: increasing the Council's recycling rate; increasing the amount of household waste collected; and increasing the amount of household waste diverted from landfill.

1.2 Procurement process

Due to the value of the Contract being above the threshold for Services, the Council is required to procure new contracts in accordance with the Public Contracts Regulations 2015.

The intended route to market is open tender as the requirements, selection and award criteria are relatively straightforward, and it is the quickest route to market available to the Council.

Bidders will be required to declare that they have a valid waste operators' licence, and evidence this prior to award, which will demonstrate that their operational facilities and vehicles meet legal requirements.

The award criteria will have greater focus on quality, with a weighting of 60%, with price being assessed with a weighting of 40%. This is likely to provide a good balance of cost and quality of service. Qualitative aspects are of importance to this contract, as to be successful, suppliers will need to demonstrate and commit to delivering a reliable service and to meet key performance indicators in the contract.

Bidders will be asked to propose discounted rates if they are successfully awarded two lots and quantify this. Pricing will be evaluated for each individual lot, and discounted rates will not be included in the evaluation. If following evaluation there is the same preferred bidder on two lots, then the discounted rates will apply to the contract.

2. Legal Issues:

Public Services Social Value Act
In January 2013, the Public Services (Social Value) Act 2013 came into force. Under the Act the Council must before starting the process of procuring a contract for services consider two things. Firstly, how what is proposed to be procured might improve the economic social and environmental wellbeing of its area. Secondly, how in conducting the process of procurement it might act with a view to securing that improvement. The Council must only consider matters that are relevant to the services being procured and must consider the extent to which it is proportionate in all the circumstances to take those matters into account. In considering this issue the Council must be aware that it remains bound by the Public Contracts Regulations 2015 which itself through its requirement for transparency, fairness and non-discrimination places limits on what can be done to achieve these outcomes through a procurement.

The HWRC haulage service contributes to the environmental wellbeing of the area by contributing to the effective treatment and disposal of household waste including recycled waste streams. The proposal to let the contract through lots may encourage local suppliers to bid thereby contributing to the local economy.

Ways will be explored of securing social value through the way the procurement is structured. As referred to above structuring the procurement into lots has the potential to secure social value through an increase in participation in the services by local firms.

Under section 1(7) of the Public Services (Social Value) Act 2013 the Council must consider whether to undertake any consultation as to the matters referred to above. The service and the value it delivers is well understood. This and the market engagement carried out is considered to be sufficient to inform the procurement. It is unlikely that any wider consultation would be proportionate to the scope of the procurement.

Equality Act 2010
Under section 149 of the Equality Act 2010, the Council must, in the exercise of its functions, have due regard to the need to:
- Eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under the Act.
- Advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it.
- Foster good relations between persons who share a relevant protected characteristic and persons who do not share it.

The relevant protected characteristics are age; disability; gender reassignment; pregnancy and maternity; race; religion or belief; sex; and sexual orientation.

Having due regard to the need to advance equality of opportunity involves having due regard, in particular, to the need to:

- Remove or minimise disadvantages suffered by persons who share a relevant protected characteristic that are connected to that characteristic.
- Take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it.
- Encourage persons who share a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low.

The steps involved in meeting the needs of disabled persons that are different from the needs of persons who are not disabled include, in particular, steps to take account of disabled persons' disabilities.

Having due regard to the need to foster good relations between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to tackle prejudice, and promote understanding.

Compliance with the duties in section 149 may involve treating some persons more favourably than others.

The duty cannot be delegated and must be discharged by the decision-maker. To discharge the statutory duty the decision-maker must analyse all the relevant material with the specific statutory obligations in mind. If a risk of adverse impact is identified consideration must be given to measures to avoid that impact as part of the decision-making process.

The Equality Act 2010 has been considered, and the decision is not considered to have any implications for people with a protected characteristic.

Joint Strategic Needs Assessment (JSNA and the Joint Health and Wellbeing Strategy (JHWS)

The Council must have regard to the Joint Strategic Needs Assessment (JSNA) and the Joint Health and Wellbeing Strategy (JHWS) in coming to a decision.

The decision is not considered to have any implications for the Joint Strategic Needs Assessment (JSNA) and Joint Health and Wellbeing Strategy (JHWS).

Crime and Disorder

Under section 17 of the Crime and Disorder Act 1998, the Council must exercise its various functions with due regard to the likely effect of the exercise of those functions on, and the need to do all that it reasonably can to prevent crime and disorder in its area (including anti-social and other behaviour adversely affecting the local environment), the misuse of drugs, alcohol and other substances in its area and re-offending in its area.

The decision is not considered to have any implications for the section 17 matters.

3. Conclusion

An Open Tender in accordance with the Public Contract Regulations will ensure a compliant procurement process and will enable a detailed and seamless implementation from the current supplier.

Awarding a contract on the basis of lots to multiple suppliers will ensure that targets are met through sharing demand, and efficiency and sufficiency of vehicles and drivers based on what suppliers in the market can have available to meet the Councils requirements.

4. Legal Comments:

The Council has the power to procure and enter into the contracts proposed.

The proposed continuation of services and procurement of a new contract are compliant with the Council's procurement obligations.

The decision is consistent with the Policy Framework and within the remit of the Executive Councillor

5. Resource Comments:

Cost pressures or savings from these changes to contracts is expected to be managed within the wider Waste Management revenue budget.

6. Consultation

 a) **Has Local Member Been Consulted?**

 N/A

 b) **Has Executive Councillor Been Consulted?**

 Yes

 c) **Scrutiny Comments**

 The decision will be considered by the Environment and Economy Scrutiny Committee at its meeting on 12 September 2023 and the comments of the Committee will be reported to the Executive Councillor

d) Risks and Impact Analysis

See the body of the Report

7. Background Papers

No background papers within Section 100D of the Local Government Act 1972 were used in the preparation of this report.

This report was written by Paul Beales and Mike Reed, who can be contacted on paul.beales@lincolnshire.gov.uk.

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Open Report on behalf of Andrew Crookham, Executive Director - Resources

Report to:	**Environment and Economy Scrutiny Committee**
Date:	**12 September 2023**
Subject:	**Scrutiny Review Report: Town Centre Improvements**

Summary:

In September 2021, the Overview and Scrutiny Management Board approved a review of Town Centre Improvements and Scrutiny Panel A was assigned the task of undertaking this review, including preparing a draft report with recommendations, for consideration and approval by this Committee. The final report will be considered by the Executive on 3 October 2023.

A draft report, attached at Appendix A to this report, has been prepared by the Scrutiny Panel, and includes six areas for its recommendations.

Actions Required:

The Environment and Economy Scrutiny Committee is invited to consider approving the draft report, attached at Appendix A, as the final report on Town Centre Improvements for submission to the Executive on 3 October 2023.

1. Background

On 30 September 2021, the Overview and Scrutiny Management Board approved a scrutiny review of Town Centre Improvements in the context of stimulating new business and employment opportunities, reviving retail, and supporting a broader demographic to use town centres, notably by younger people. Scrutiny Panel A was assigned the task of undertaking the review, preparing a report with recommendations, for consideration and approval by this Committee, for consideration by the Executive.

The terms of reference were developed at the first meeting of the Scrutiny Panel. The review would focus on current needs and opportunities emerging in Lincolnshire town centres (excluding Lincoln), high streets and market towns.

The following key lines of enquiry for the scrutiny review were agreed by the Panel:

(1)   Understanding changes in behaviours, shopping, land use and the impact of technology on the future of high streets across Lincolnshire and how that changes the infrastructure and services needed in town centres.

(2)   Consider the delivery of existing Towns Fund deals; future project pipelines and the ways in which the Council could effectively support such changes and projects.

(3)   Examine how the Council can support the needs of businesses (including retail and hospitality sectors) in town centres, including hardships arising from the Covid-19 pandemic and the EU Transition.

(4)   Identify the best practice of supporting green recovery of the high street.

The Scrutiny Panel comprised Councillors Phil Dilks (Chairman), Tracey Carter (Vice Chairman), Stephen Bunney, Mrs Julie Killey, Noi Sear, Adam Stokes, and Mark Whittington. The Panel met on twelve occasions between January 2022 and April 2023. A series of site visits and workshops were also conducted throughout the duration of this review. Previous scrutiny activity on this subject is set out in the relevant appendices to the report.

The draft report is attached at Appendix A for the Committee's consideration, with a view to the Committee approving the report for consideration by the Executive on 3 October 2023.

2. Conclusion

The Committee is requested to consider the report attached at Appendix A, including the recommendations, and approve the report for submission to the Executive on 3 October 2023.

3. Consultation

Not applicable.

4. Appendices

These are listed below and attached at the back of the report	
Appendix A	Town Centre Improvements – Draft Report by Scrutiny Panel A on behalf of the Environment and Economy Scrutiny Committee (August 2023)
Appendix B	Appendices 1 - 7 Evidence Considered

5. Background Papers

No background papers within Section 100D of the Local Government Act 1972 were used in the preparation of this report.

This report was written by Kiara Chatziioannou, Scrutiny Officer, who can be contacted on 01522 552102 / 07500 571868 or by e-mail at Kiara.Chatziioannou@lincolnshire.gov.uk

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TOWN CENTRE IMPROVEMENTS

Report by Scrutiny Panel A on behalf of the Environment and Economy Scrutiny Committee

August 2023

1.   Executive Summary

At a time of global economic uncertainty, there are opportunities for Lincolnshire, many of which are driven or facilitated by our towns and in particular high streets and market towns as places to visit, shop, socialise and do business.

In this context, the Panel's Report reviews the local and strategic responses available to the County Council to enable it to effectively support Lincolnshire's high streets and market towns to:

- maximise existing opportunities;
- to achieve economic and environmental sustainability;
- to help stimulate the visitor economy;
- to support job creation and business growth and start up in town centres and
- to diversify the town centre offer to make it more attractive to new users including younger people.

In recent years, market towns and high streets across the UK have been hit by a perfect storm. This includes structural change to the way that consumers shop and the ways that businesses interact with each other as innovation in online shopping and digital and social media platforms have hastened a decline in physical footfall. This began before the pandemic but was accelerated by it.

The economic effect of the pandemic and latterly the cost-of-living crisis have impacted the bottom line of high street businesses – with retailers, services and hospitality businesses experiencing high numbers of closures as consumers have restricted their discretionary spend at the same time as businesses have increased prices due to increased input costs (energy, fuel, rent etc).

Nationally high streets and market towns have changed or are changing significantly with some experiencing visible decay particularly around long term vacant commercial properties and reduced service offers such as the closure of high street banks. Others display a lack of investment in developing a high-quality public realm (including street furniture, public art, parks, and paths/public rights of way).

However, some towns are thriving, having successfully developed specific, compelling offers that have set them apart from homogenous high streets and drawn people back to in-person visits, often for leisure as well as retail visits. This was in play before the pandemic but has more recently benefitted from people having looked 'local' throughout 2020 and 2021 to meet their purchasing needs.

Accordingly, the Scrutiny Panel has sought to examine the current needs of businesses on the high streets of Lincolnshire, accounting for the impacts of the pandemic and transition and

exit from the EU and sought to link opportunities for a 'green recovery' as a means of creating sustainable, stronger, and resilient high street communities.

Moreover, the Panel's work has accounted for the impact of the extensive level of current and planned town centre investment and how its recommendations can add value to that.

An important element of the Panel's work is the recognition of changes in behaviours including shopping, land use and the impact of technology on the future of high streets across Lincolnshire and how that changes the infrastructure and services needed in town centres.

Furthermore, many stakeholders support and influence our town centres: public, private and third sector as well as the communities who live there and individuals who visit. The Panel heard from expert witnesses and considered a wide range of evidence; however, the Panel has focussed specifically on the role of Lincolnshire County Council and what it can do to affect change. Account is taken of activities being undertaken by other local stakeholders and all recommendations seek to be complimentary to planned and current activity.

As such, the Panel also undertook the review in the context of how any proposed interventions will enable Lincolnshire County Council to maximise the impact and delivery of the Corporate Plan's four ambitions for Lincolnshire which are:

1. High aspirations
2. The opportunity to enjoy life to the full
3. Thriving environments
4. Good-value council services

The recommendations within this report seek to support our key findings and some key strategic areas for improvement, which focus on:

- Leadership and Policy
- High Street Businesses
- Placemaking, Funding and Skills
- Technologies, Innovation and Digitalisation
- Data-Driven Decision Making & Targeted Investment, and
- Green Growth

Scrutiny Panel A has agreed the following recommendations for the Executive's consideration:

Recommendation 1 - Leadership and Policy

That Lincolnshire County Council engage annually with each of the established 8 Local Transport Boards (LTB) to discuss town centres. This will bring together local strategic partners to discuss and agree actions to address local town centre issues and opportunities and will promote cohesive action with short, medium, and long- term outcomes.

This builds on the Panel's conclusions set out in section 3.3 that recognises the need for:

- **extensive cross-sectoral partnership activity which is being informed by local needs**;
- proactive planning and collaboration as an **important mechanism to bring together other ingredients of success to high streets** such as car parking, cycling storage, and public transport; and
- the vital role of **neighbourhood plans** which can bring together the local community's input and help support local shopping areas that meet local needs and will therefore drive ongoing use.

Further the LTB approach will provide opportunities for towns and villages, in close proximity, to work together to best effect.

Recommendation 2 - High Street Businesses

(a) That the County Council lobbies those organisations that restrict businesses and support further streamlining of administrative processes for town centre businesses, including licencing.

(b) That the County Council be supportive of High Street businesses by developing a Single point of Contact (SPOC) for town centre matters; and streamlining processes internally to support businesses.

(c) That the County Council seeks to provide businesses with business support and continues to seek for funding to enable this.

(d) That opportunities be considered through regulatory services, such as Trading Standards, to offer selected business advice to support town centre business start-ups.

(e) That a pilot be explored to '*keep the local spend local*', working with Lincolnshire County Council's procurement, partners and existing '*buy local*' initiatives.

Recommendation 3 – Placemaking, Funding and Skills

(a) That Lincolnshire County Council work with North Lincolnshire Council and North East Lincolnshire Council to recognise the vital role of market towns in Greater Lincolnshire and to review opportunities for appropriate funding and budgets to support their viability and vitality (including infrastructure provisions) as a key ingredient in growing the economy of Greater Lincolnshire (referenced in Section 4 – Leadership and Strategy).

(b) That the County Council encourage good design across town centres through its development management functions and through partnership working with teams at Local Planning Authorities and other stakeholders.

(c) That design excellence, local distinctiveness, and character of town centres are encouraged through partnership working (under guidance from the Historic Places Team); and that quality public realm offers/green spaces are created to provide residents and visitors with the opportunity to increase dwell time and to support health and wellbeing objectives and help develop Lincolnshire's visitor economy (this links to recommendation 2b).

(d) That consideration be given to each County Councillor receiving a £3,000 budget to support local activities aimed at increasing town centre footfall. Funding to be allocated through an established criteria and aligned to the work and findings of the LTBs (this links to recommendation 1).

Recommendation 4 - Technology, Innovation and Digitisation

(a) That Lincolnshire County Council takes a firm view on developments and lobby government so that planning authorities have a greater say in the siting of 5G infrastructure.

(b) That the County Council support initiatives to drive digital skills amongst people who work in town centres, where appropriate.

(c) That Lincolnshire County Council test community and visitor opportunities to '*digitise the high street*', working in partnership with local areas to ensure content is created

and managed in real time, along the lines of the pilots currently being developed in Holbeach and Mablethorpe (this will build on the work of the Council's Historic Environment Team and look at other opportunities to animate spaces including the use of pop-up museums).

Recommendation 5 - Data-Driven Decision Making & Targeted Investment

That data and lessons captured through pilots, including digital highstreets and Local Electric Vehicle Infrastructure fund are used to inform better business cases to support interventions and investments in town centres.

Recommendation 6 – Green Growth

That Lincolnshire County Council: -

(a) Develop a digital Green Retail/Hospitality Guide aimed at supporting independent businesses.

(b) Improve facilities to encourage bike use on high streets (basic Sheffield stands) – linking to the work of the LTBs.

(c) Encourage the use of service budgets to improve outcomes through investing in pilot activity, where benefits are aligned to the County Council's aspirations for inclusive green growth.

2. Terms of Reference and Approach to the Review

2.1 Approval of the Review

On 30 September 2021, the Overview and Scrutiny Management Board considered and approved a review of Town Centre Improvements in the context of stimulating new business and employment opportunities, reviving retail, and supporting a broader demographic to use town centres, notably by younger people. The terms of reference were agreed at the first meeting of Scrutiny Panel A in January 2022. In effect, this would be an in-depth review of current needs and opportunities emerging in Lincolnshire town centres (excluding Lincoln), high streets and market towns. These terms are used interchangeably throughout the report.

The Scrutiny Panel comprised Councillors Phil Dilks (Chairman), Tracey Carter (Vice Chairman), Stephen Bunney, Mrs Julie Killey, Noi Sear, Adam Stokes, and Mark Whittington.

2.2 Terms of Reference

The following key lines of enquiry for the scrutiny review were agreed by the Panel:

(1)   Understanding changes in behaviours, shopping, land use and the impact of technology on the future of high streets across Lincolnshire and how that changes the infrastructure and services needed in town centres.

> We believe we have achieved this by:
>
> a.   reviewing national policies;
> b.   considering best practice;
> c.   analysing trends; and
> d.   considering national and regional reports.

(2)   Consider the delivery of existing Towns Fund deals; future project pipelines and the ways in which the Council could effectively support such changes and projects.

> We believe we have achieved this by:
>
>   a. reviewing national policies and funding;
>   b. reviewing local activity and assessing best practice responses across the UK;
>   c. commissioning and considering evidence from case studies;
>   d. analysing town-focused infrastructure needs at a local level through the Greater Lincolnshire Strategic Infrastructure Delivery Framework (SIDF); and
>   e. assessing the Council's current activities to determine where current and future activity can add value.

(3)   Examine how the Council can support the needs of businesses (including retail and hospitality sectors) in town centres, including hardships arising from the Covid-19 pandemic and the EU Transition.

> We believe we have achieved this by:
>
>   a. analysing Business Lincolnshire (Growth Hub) activity and support;
>   b. considering the impact of the support provided through the Lincolnshire County Council-led Covid-19 responses (comprising Rural Business Grant, Business Recovery Fund, Invest for the Future and Digital Voucher Scheme);
>   c. meeting representatives from the Federation of Small Businesses (FSB) and the Lincolnshire Chamber of Commerce (CoC); and
>   d. researching and analysing business needs/offers elsewhere, including assessments of *what works*.

(4)   Identify the best practice of supporting green recovery of the high street.

> We believe we have achieved this by:
>
>   a. reviewing evidence; and
>   b. considering the context of the County Council's Green Masterplan.

Building on the above the aim of this report is: **"*to consider how Lincolnshire County Council could develop its leadership and support Lincolnshire's high streets to maximise existing opportunities, to achieve economic sustainability, to recover from the pandemic and to help stimulate a visitor economy as well as to support job creation in town centres*."**

2.3   Approaches to the Review

The Panel met twelve times between January 2022 and April 2023. A series of site visits and workshops were also conducted throughout the duration of this review. Previous scrutiny activity on this subject is set out in Appendix A.   Some specific areas explored by this review included:

- engagement with business representatives to determine business needs in town centres and to explore business-led opportunities to improve the place-based offer to increase footfall and visitor numbers;

- the visitor economy, heritage and the Lincolnshire Extensive Urban Survey project;

- placemaking - what makes our town centres special to their communities and attractive to visitors;

- high street challenges and opportunities;

- decarbonisation and net zero - what towns can meaningfully do; and

- infrastructure needs in town centres.

Importantly, the Panel did not focus on the city centre of Lincoln, as its needs do not, for the most part, coincide with the needs of market towns and smaller town centres.

Further, whilst four town case studies were undertaken, no recommendations are made specific to these four towns, and we believe they can be applied in full or part to many of the towns in Lincolnshire whilst maintaining local distinctiveness.

The report refers in places to 'public sector' and 'local government' – this covers both district and upper tier functions and may require a combination of roles to achieve successful change or adaption. As a guide, Table 1, on the next page, sets out the split of statutory and discretionary functions in a two-tier geography.

Table 1 – Two tier local government roles and responsibilities Bold denotes services that have a key impact/bearing on Lincolnshire high streets in particular	
Role/Activity	**Responsibility**
Adult social care	County
Arts/culture	**Both**
Building Regs	District
Births, Deaths, Marriages - registration	County
Burials and cremations	District
Childrens Services	County
Coastal protection	Both
Community Safety	**District**
Concessionary Travel	**County**
Council Tax and Business Rates collection	**District**
Consumer Protection	**County**
Economic Development	**Both**
Education and Related Services	County
Elections/Electoral Register	District
Emergency Planning	County
Environmental Health	**District**
Highways and Roads	**County**
Housing	**District**
Leisure Centres and Parks	**District**
Libraries	**County**
Licensing	**District**
Local Planning	**District**
Markets and Fairs	**District**
Museums and Galleries	**Both**
Parking	**Both**
Public Conveniences	**District**
Public Health	County
Strategic Planning	County
Street cleaning, waste collection and recycling	**District**
Tourism	**Both**
Trading Standards	**County**
Waste Disposal	**County**

2.4   Contributors to the Review

We would like to record our thanks to the following contributors, who attended our meetings:

- Justin Brown, Assistant Director – Growth
- Vanessa Strange, Head of Infrastructure Investment
- Mandy Ramm, Funding, and Investment Manager
- Warren Peppard, Head of Development Management
- Samantha Harrison, Head of Economic Development
- Mary Powell, Place, and Investment Manager
- Ian George, Historic Places Manager
- Nicola Grayson, Extensive Urban Survey Project Officer
- Jeanne Gibson, Programme Leader, Minor Works, and Traffic
- Simon Beardsley, Chief Executive, Lincolnshire Chamber of Commerce
- Katrina Pierce, Development Manager, Lincolnshire Federation of Small Businesses
- Steve Kemp, Director, OpenPlan

In addition, we would like to thank the ten town and parish councils (Alford, Coningsby, Crowland, Holbeach, Horncastle, Long Sutton, Louth, Mablethorpe and Sutton, Market Rasen and Sleaford), who responded to our survey.

Contributions were also received from the Lincolnshire Youth Council (Voices4Choices – Boston and South Holland; Voices4Choices – Lincoln and West Lindsey; and Lincolnshire Young Voices). Their views are captured in Appendix F.

A variety of players exist in looking after and developing the market town and town centres in Lincolnshire. From Town and District Councils to coalitions and networks of local businesses, communities, and the voluntary sector. The Panel has been vigilant to understand and recognise these different roles and any plans that are in place for investment now or in the future. Accordingly, the Panel's recommendations are strategic and seek to add value to developing a place-based approach to developing vital and viable town centres in Lincolnshire.

3. National Policy and External Funding

3.1   Introduction

High streets can be lively, dynamic, exciting and social places that give a sense of belonging and trust to a community (The Portas Review, 2011)[1].

National and local government has focused extensively on high street recovery over recent years, from support to address structural change in the high street, to the recovery from the pandemic, through to the focus of the planning system. Further, significant investment has been awarded to high streets and towns as a means of supporting economic recovery post covid and as part of reviving communities.

We believe that there are opportunities in Lincolnshire to consolidate, expand or develop place-based activities that will create town centres that attract people to visit, shop, socialise and do business.

3.2   Summary of National Policies and Funding

3.2.1   Build Back Better High Streets Strategy

Since 2019, Government has invested in a variety of high street programmes including the £830m Future high Streets Fund to *'renew and reshape town centres'*, the £2.4 billion Towns Fund to *'unleash the economic potential'* of towns, the £95 million invested in High Streets Heritage Action Zones and £2.6 billion of UK Shared Prosperity Fund (UKSPF) resources to *'restore local pride across the UK'*. UKSPF supports three main areas of investment:

- Improving communities and places
- People and skills and
- Supporting local businesses

A breakdown of the government funding received in Lincolnshire is included in Appendix B.

In July 2021, the Government published its *Build Back Better High Streets Strategy[2]*, which sets out the government's long-term plan to *'support the evolution of high streets into thriving places to work, visit and live'.* The strategy seeks to:

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[1]   For the full report please visit The Portas Review
[2]   For more information please refer to (Build Back Better High Streets Report (publishing.service.gov.uk)

- ➢ make it easier to convert empty shops into new uses, including housing;
- ➢ grant automatic rights for pubs, restaurants and cafes to allow takeaway and allow al fresco dining; and
- ➢ make high streets safer and cleaner.

Build Back Better (supplement June 2020) focused in on independent retailers, independent hospitality and independent service businesses.

3.2.2 Levelling-Up the United Kingdom

The Government published its White Paper *Levelling-Up the United Kingdom* on 2 February 2022[3]. In addition to confirming the aims of the Government's funding streams (see below), the Government put forward further measures that *'can make high streets and town centres the thriving hearts of our communities'*. This referred to reforming local taxation to help support local high street revival. Several of the proposals requiring legislation were included in the Levelling-Up and Regeneration Bill which is currently going through its committee stages. The Bill includes several provisions aimed to revitalise high streets, of particular interest are plans to enable local authorities (district councils) to initiate a process, whereby property owners would be required to let vacant premises in a designated high street or town centre.

The Government's Levelling Up Fund (LUF) is a capital programme designed to invest in infrastructure that improves everyday life across the UK. The £4.8 billion national fund helps support town centre and high street regeneration, local transport projects and cultural and heritage assets. In Greater Lincolnshire, £30 million was allocated to two projects in October 2021 (LUF 1) and a further £62.9 million was announced in January 2023 (LUF 2).

3.2.2 High Streets Task Force

The High Streets Task Force (2022-24) is supporting high street regeneration and is facilitating selected[4] local authorities with access to expert support in areas such as placemaking, planning and design. The Task Force already provides online resources and training modules, webinars, and access to data dashboards for all Local Authorities (LAs)[5].

The toolkit has been reviewed and where appropriate the principles have been applied in the Panel's considerations.

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[3] For more information please refer to Levelling Up the United Kingdom White Paper (publishing.service.gov.uk)
[4] These LAs have been allocated using the Indices of Multiple Deprivation (IMD), together with a measure of retail exposure.
[5] For more information please refer to Support Directory | High Streets Task Force.

3.2.4 Parliamentary Scrutiny

A report by the House of Commons Levelling Up, Housing and Communities Committee, titled *Supporting our High Streets after Covid-19* was published in December 2021 and looked at the effectiveness of the Government's various funding schemes in supporting local authorities in high street regeneration. A principle that emerged from the Committee's report was the importance of developing long-term plans that consider high streets and town centres in the round and not on a unit-by-unit basis. The Government's response to the select committee's recommendations was published in March 2022, which confirmed the importance of up-to-date Local Plans, as essential in making good use of land, resulting in well-designed and attractive places to live.

3.2.5 Planning

Most of the planning functions affecting towns is exercised by the district councils as the Local Planning Authority (LPA).

Each LPA has a different approach to retail and town centres depending on local circumstances and what challenges and opportunities exist. However, in the context of town centres Government policy as contained in the National Planning Policy Framework (NPPF) states: "*Planning policies and decisions should support the role that town centres play at the heart of local communities, by taking a positive approach to their growth, management and adaptation*" (Para. 86).

Further reference to planning is made in the report particularly in relation to the issues being faced by existing businesses.

3.3 Conclusions and key learnings, on what is important in a policy and funding context and how it is applied locally in Lincolnshire.

We were advised that a variety of partners are currently implementing policy and levelling up investment in Lincolnshire towns. This adopts a local, place-based approach which includes:

- The work and Town Deal investment being undertaken by District Councils. This is vital to addressing some of the most urgent cases of levelling up need in towns with awards made to the four Lincolnshire towns of Lincoln, Boston, Mablethorpe and Skegness. Investment totals £92.2 million. Further, there are awards to Grantham, Boston and Gainsborough through other funding (the Levelling Up Fund (LUF), Future High Streets Fund and Heritage Action Zones). Awards through LUF will help create an environment for town centre improvements ranging from cultural investment to health and wellbeing. Whilst there are

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always challenges in these projects, not least of all inflationary factors, the projects are being delivered through extensive cross-sectoral partnership activity which is being informed by local needs.

- Further, the role of LPAs has been and will be vital for the vitality of high street ranging from applications for single buildings to significant changes in our high streets. At the same time, it is also an important mechanism to bring together other ingredients of success to high streets such as car parking, cycling storage, and public transport.

- Town and Parish Councils also play a vital role via neighbourhood plans which can bring together the local community's input and help support local shopping areas that meet local needs and will therefore drive ongoing use. Maximising coverage of neighbourhood plans will help support local shopping areas where relevant, and

- In a planning context, the Panel also noted and supported the use of outside spaces to expand the offer and reach of hospitality in town centres (this is referenced further in 6.1.2, page 29).

These points are reflected in Recommendation 1 aligned to Leadership and Policy.

4. Leadership and Strategy

The Panel sought to understand the role of Lincolnshire County Council as a leader in facilitating successful synergies and in curating effective partnerships that can help drive the best outcomes for all town centre stakeholders. These stakeholders included business tenants, owners, users, residents, visitors, organisations, and networks – both private and public sector.

We considered local authority procedures, structures, and resources as well as roles in developing strategies and plans that could enable positive changes and the evolution of our town centres.

We concurred that there is a role for Lincolnshire County Council that cements providing Lincolnshire residents with excellent services that meet their needs. That is the role of the council as a place leader (see further section 7).

Lincolnshire County Council's role is therefore twofold:

- to **act as a convener** of individuals, stakeholders and organisations that are needed to co-design and deliver change; and
- to be a **key strategic influencer** that unites all under a shared vision, mission, plan, and strategy for change.

4.1   Lincolnshire High Streets Task Force

Since 2021 the City of Lincoln and West Lindsey District Council have received direct support from the High Streets Task Force to develop local authority leadership in engaging with communities, businesses, and other public sector organisations. This aim is to diagnose barriers and adopt positive interventions to increase footfall and create the conditions for maintaining town centre viability and sustainable development. This includes support with place-making, planning and design.

Lessons can be learnt from this when pulling together a wider Lincolnshire approach to placemaking.

4.2 County Deal

The Government's County Deal programme aims to provide upper tier local authorities with a range of opportunities to enhance their ability to govern and shape the economic and social landscape of their region. In February 2022, Lincolnshire County Council, North Lincolnshire Council and North East Lincolnshire Council prepared a prospectus: *Levelling Up Lincolnshire – A County Deal for Greater Lincolnshire.*

The transfer of decision-making powers from the Government would support Lincolnshire to make more tailored and responsive decisions that reflect the needs and priorities of its places and communities. Moreover, greater control over the budgets and resources would enable investment in those projects that would drive economic growth, enhance public services, and improve quality of life for residents across the County.

The proposed *Levelling Up Lincolnshire – A County Deal for Greater Lincolnshire* includes ten 'asks' and several of these would support the consolidation and revival of high streets:

- electric vehicle charging in rural areas, market towns and urban centres;
- improving public transport connectivity;
- active travel for routes to support our growth sectors, access to jobs and education/training, and which boosts the green and visitor economy; and
- a devolved adult education budget to grow skills.

Reference is made within the recommendations to use the County Deal as a platform to work with North and North East Lincolnshire Councils to support town centre investment as a driver of growth (see section 2).

4.3 Inclusive Growth

The Greater Lincolnshire region is committed to inclusive economic growth and levelling up, working to identify and address opportunities and challenges through strategies and visions such as Protecting, Progressing, Prospering – Greater Lincolnshire's Economic Plan for Growth and longer-term ambitions around the Greater Lincolnshire Strategic Infrastructure Delivery Framework (SIDF) and Vision 2050 (see below).

These approaches look to promote growth that is accessible for all, enabling everyone to reach their own potential and to achieve good health and well-being outcomes as per the Council's Corporate Plan priorities.

The Lincolnshire economy is often underplayed, but it contributes significantly to national productivity with well-known strengths in logistics (South Holland has the second highest concentration of logistics in the UK) and agrifood (Lincolnshire is home to Europe's largest agri-food automation and robotics cluster, three food enterprise zones, an agricultural growth zone and produces a third of the nation's vegetables). We also have emerging strengths in defence and security (capitalising on the county housing/being proximate to 40% of the RAF's assets and associated skills base) and health and care (Lincolnshire is already a world leader in rural health innovation and care).

The county offers a good quality of life, and it is attractive to people relocating to the area for employment, to retire or as a lifestyle choice.

Lincolnshire also remains a well visited tourism destination – our market towns, city, heritage, and environmental assets as well as our coastline attract domestic and overseas visitors with our natural assets presenting opportunities to promote green tourism going forward.

A key factor in all of this is the location and service offer of our market towns, towns, and high streets.

Nevertheless, there are significant pockets of deprivation in Lincolnshire and based on the aim for inclusive growth, at the heart of key Lincolnshire strategies is the desire to ensure that town centres are accessible, connected (physically and digitally) and available to everyone.

4.4 Vision 2050

In September 2022, all Greater Lincolnshire authorities agreed the 2050 Vision for Greater Lincolnshire – A Flourishing Future for All. This set out a vision for what Greater Lincolnshire will be in 2050. The extracts below focus on high streets and market towns, this sets the tone for the approach to town centre vitality within the Greater Lincolnshire Devolution deal.

> *"Greater Lincolnshire has a unique place in the future success of our nation as the source of clean energy, carbon capture opportunities and food security. This vision is our chance to set a new standard for what a good life is in the 21st century. (…) Our towns, villages and city high streets are hives of activity. They are great places for people to meet, and for young and old to spend their leisure time safely together. We have seen the creative reuse of buildings like department stores into spaces to live, work, and play, which seamlessly blend marketplaces and co-working spaces. New entrepreneurs are starting out on their journey, taking advantage of the creative community, and digital connectivity, inspired by their work-live opportunities. Our seaside is renowned as the best promenades in the UK, rivalling any in Europe."*

Vision 2050 (and supporting strategies such as the SIDF) look to focus key aspects of growth on Greater Lincolnshire's network of towns supporting housing and economic growth, this will contribute to:

- ✓ Increased wealth (absolute and per capita)

- ✓ Improved quality of life

- ✓ A healthier society, and

- ✓ A Greater Lincolnshire economy, population and environment that can be resilient to climate change and that can benefit from future economic and technological opportunities.

4.5 Partnership Development and Engagement

The multi-faceted Town Deal partnership approach to Town Deals have been effective across the UK with 4 town deal boards in Lincolnshire. They are cross sectoral, locally driven and access a plethora of skills as required for their programmes. As with most effective partnerships, they have evolved and developed and have drawn heavily on local consultation, input and feedback.

We believe that effective partnerships emerge where the working conditions are positive, there is a clear vision and shared aspirations and participants are encouraged to aspire, innovate and '*think outside the box*'.

By aligning partnership roles, expanding participation, and empowering partners to challenge current thinking, collaboration will have the greatest impact.

The sections below look at some further strategies, plans and partnership boards that form part of the panel's review.

4.5.1 Local Transport Boards

Local Transport Boards (LTBs) are joint bodies developed across the main urban areas and larger market towns across Lincolnshire.

LTBs *"are at the heart of local delivery and enable partners to consider and develop interventions and schemes that reflect the locality and are founded upon a sound evidence base. They are also able to integrate schemes into local programmes and packages enabling*

greater efficiencies and the ability to make significant improvements across all modes and against a wide-range of objectives"[6].

We believe that connectivity should be a regular agenda item for LTBs, when designing, reviewing, proposing interventions, and delivering the local strategies. The Panel heard from many contributors about the importance of access to our town centres – whether getting there by bus, car, foot, or bike - access was vital.

The LTBs across Lincolnshire will provide a strong forum for a debate on the impact of transport and travel decisions on Place. Through both:

> ➤ Key transport strategies such as the Bus Service improvement Plan and

> ➤ LTP 5 (see below) when updated considering expected government guidance later in 2023 – particularly in terms of decarbonisation opportunities.

These Boards are also reflected in a further recommendation based on their make-up, terms of reference and ability to link local and strategic discussions for place-based discussions.

4.6 Traffic Regulation

The LTB is also a good forum to test and engage on Traffic Regulation Orders (TROs).

A key role for the County Council is in managing traffic and parking, principally through the making of Traffic Regulation Orders (TROs). For example, TROs can be used to:

- restrict traffic to certain areas;

- restrict certain types of vehicles to certain times of day or days of the week;

- manage parking by introducing limited waiting times; and

- apply restrictions to an area which means that yellow lines do not have to be used, if an area is environmentally/visually sensitive.

4.6.1 Resourcing TRO Team

In Lincolnshire there is a small, dedicated team processing TROs[7]. A key focus is on addressing issues around schools, but TROs can also be used to facilitate the effective operation of high streets and can accordingly contribute to the local business environment, if circumstances

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[6] For more information please refer to Lincolnshire Local Transport Plan 5.
[7] Further information on TROs is contained in **Appendix G.**

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allow, by managing appropriate traffic flows and parking regimes. This can be best implemented by a whole-area approach rather than piecemeal change.

However, there are issues with the time it takes to deliver the formal legal processes for TROs and the capacity in the team. In February 2022, a backlog of about 200 traffic regulation order requests was reported. A standard TRO will take around four months if there are no objections; and up to eight months if objections are received.

> It is welcomed that during this review, enhanced resources have been provided to support the TRO team in terms of capacity to deliver the statutory processes. This will help support the 'whole-area' approach and facilitate some of the issues businesses raised on parking in town centres and market towns.

4.7   Lincolnshire Local Transport Plan 5

The Lincolnshire Local Transport Plan 5, which was approved in 2022, has scope to:

➢ Develop local LTBs and local town transport strategies to identify schemes at the local level;

➢ Improve connectivity across towns and engage with local communities for the latter to contribute to the on-going development of transport solutions across the county;

➢ Utilise the LTBs to develop and introduce improvements to local walking and cycling networks; and

➢ Support the provision of local facilities and services to enable people to live locally and lower their carbon footprint by reducing travel distances.

4.8   Strategic Infrastructure Delivery Framework 23

The Strategic Infrastructure Delivery Framework 23 (SIDF)[8] was commissioned by the Greater Lincolnshire Infrastructure Group and supported by eleven local authorities in Greater Lincolnshire and Rutland. It seeks to support the infrastructure theme of the County Deal and is aligned to inclusive growth and net zero aspirations.

The SIDF details the areas where strategic infrastructure investment, as a driver of inclusive growth, is most needed in Greater Lincolnshire. It supports:

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[8] More details on SIDF 23 can be found in **Appendix D.**

- Transport (roads, rail, ports, aviation, rural public transport and active travel), digital, energy, water and waste infrastructure that is fit for growth.

- Housing stock that is affordable, healthy, sustainable, accessible and represents an environment attractive to housing investment (including in town centres).

- Business infrastructure that can create more high value jobs, innovate and increase productivity.

- Prosperous, accessible high streets and market towns which showcase their unique identities and instil a sense of ownership and pride in our residents while attracting visitors to our area; and

- A healthy population with access to appropriate services and resources that help them achieve wellbeing and a good quality of life.

The SIDF also promotes a reduction in transport-related carbon dioxide emissions and the protection/enhancement of the natural and built environments, through advocating for sustainable transport solutions, supporting the introduction of low-carbon technologies, and reducing reliance on fossil fuels, by seeking to support and co-ordinate activities around:

- active travel routes that support our growth sectors (including green tourism), enabling access to jobs, and boosting the green economy;

- the introduction of low carbon technologies and developing access to alternative transport fuels including hydrogen;

- the strategic distribution of electric vehicle charging points and energy distribution;

- investment to upgrade the region's bus fleet to improve the uptake of public transport, to meet the green agenda and create passenger growth / post pandemic recovery;

- upgrades to existing railway stations and promoting new stations in key rural areas to enable greater accessibility to rail services and alternative commuting options; and

- improved internal connectivity to enable residents to access jobs, training, and leisure opportunities within Greater Lincolnshire.

4.9   Green Masterplan

The Council's Green Masterplan[9] is a multi-year programme running until 2050 to ensure that Lincolnshire meets the national carbon reduction targets. Initial projects include reducing

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[9] For more information please refer to Green Masterplan – Lincolnshire County Council.

carbon emissions by 20% through a carbon management plan; installing low energy streetlights; delivering low carbon heat to buildings; assessing buildings for solar panels; creating a sustainability decision-making tool; and exploring electric vehicle opportunities.

4.10 Conclusions on Leadership

The Panel concludes that there must be a strong emphasis on leadership and co-operation in successfully promoting thriving high streets.

We recognise the role of local leadership in championing and supporting the evolution of the high street and whilst the lead organisation or individual (a business leader for example) can differ by locality, high streets need a cohesive and coherent partnership behind them which has knowledge of that area, has resources, a vision and a significant profile and credibility.

Whilst the public sector's role is important, the role of the private sector is also critical, in terms of knowledge, expertise and investment. To facilitate change in larger town centres, success has been accelerated by public sector leadership when providing a vision for regeneration (e.g., Town Deals). In smaller centres, the public sector remains a vital partner but does not necessarily have to lead.

Local authorities also play a vital leadership role when utilising knowledge of local geography, economy, and community and in where engagement and consultation is required to identify barriers and solutions.

We also note that connectivity is critical to the health and vitality of high streets – digital and accessibility (roads, rail, public transport, cycle, and pedestrian) and associated infrastructure (cycle parking, car parking, electric vehicle charging). The council has a role in supporting this.

However, the panel wants to support appropriate actions in town centres that contribute to decarbonisation and support green infrastructure and green growth. The Green Masterplan and the SIDF 23 will be useful guides in helping achieve this in line with regulatory measures (planning etc) and partnership approaches.

In this context, we concur that:

- In line with the work of the 2019 High Street Vitality Working Group, Lincolnshire High Streets are not without challenges but rather than dying they are changing. Change is at varying pace with some town centres experiencing fundamental change whereas the experience of others is more incremental. The differentiation is largely based on size, primary and secondary functions, location and the level of local partnership collaboration and aspiration.

- The most successful town centres are transitioning wholly or in part from predominantly retail areas to accessible places supporting leisure, living, *and* shopping with unique and compelling visitor offers.

- Cross sector collaboration and a high street that is green, clean, and accessible opens the town centres to new audiences and users - particularly young people.

- Engagement and strategy support a balanced interplay between town centres and the community – with town centres as a destination, which provided a sense of belonging, a focal point with heritage, culture, and local distinctiveness. This allows local people to connect with the place and promoted use.

- Accordingly, there are successful and well embedded partnerships in Lincolnshire dealing effectively with work town centre viability and vitality. There is also a plethora of strategies. To bring these together, LCC needs to be able to effectively bring strategic activity that addresses local needs particular around inclusive growth and connectivity. To do this in a timely and effective manner, it is logical to use the LTB's as existing partnership networks which are individually well versed in local issues and opportunities and bring in knowledge from other local partners/activities.

Recommendation 1 - Leadership and Policy

That our support be recorded for:

That Lincolnshire County Council engage annually with each of the established 8 Local Transport Boards to discuss town centres. This will bring together local strategic partners to discuss and agree actions to address local town centre issues and opportunities and will promote cohesive action with short-, medium- and long-term outcomes.

This builds on the Panel's conclusions set out in section 3.3 that recognises the need for:

- **extensive cross-sectoral partnership activity which is being informed by local needs**.
- proactive planning and collaboration as an **important mechanism to bring together other ingredients of success to high streets** such as car parking, cycling storage, and public transport and
the vital role of **neighbourhood plans** which can bring together the local community's input and help support local shopping areas that meet local needs and will therefore drive ongoing use.

Further the LTB approach will provide opportunities for towns and villages, in close proximity, to work together to best effect.

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5. Lincolnshire's Towns

5.1 Greater Lincolnshire

Greater Lincolnshire represents a varied mix of distinctive places. The Greater Lincolnshire economy is diverse and dispersed, which brings both opportunities and challenges. The Local Industrial Strategy (LIS) and most recently the Greater Lincolnshire Local Enterprise Partnership's (GLLEP) Economic Strategy use the idea of 'spatial corridors' to reflect economic and sectoral geographies. This cuts across towns, market towns and a city. The region is bordered by a 186-mile coastline to the east including the South Humber bank to the north, Sheffield City Region to the Northwest, Nottinghamshire, Leicestershire, and Cambridgeshire to the east and the south.

Looking at Greater Lincolnshire's towns and market towns, the areas, and audiences that they serve (residents, visitors, tourist etc) and their cultural and physical connectivity to the wider county reflects a developed place-based approach. This accords with current economic plans and showcases the wealth of activity happening within and across the county.

Further, there are strong retail and hospitality offers but it is the distinctiveness of the towns in Lincolnshire that can be leveraged to make them more competitive with like for like towns outside of Greater Lincolnshire and in acting in partnership and offering complimentary and not competing offers, further strength will be achieved by leveraging multiple offers – perhaps connected to spatial corridors already referenced. For example, across coastal Lincolnshire, South Lincolnshire, greater Lincoln, and the rural heartlands.

5.2 Which towns?

The Panel has considered various ways to select representative Lincolnshire towns for deeper analysis. The start point was the Office for National Statistics' (ONS) definition of a town having a population of 10,000 or more. Below that threshold, the ONS defines places as Built Up Areas (BUAs). Using these definitions there would be:

- eleven towns in Lincolnshire, plus the City of Lincoln;
- nine BUAs with a population of 5,000 or more; and
- sixteen smaller settlements with a population of circa 2,000 to 5,000

See **Appendix C** for further details.

As identified, the Panel selected four places which it considered representative of the issues, and which gave a spread of size, geography, and function. The rationale for their selection is set out below in Table 2. The towns are not listed in order to focus on the lessons and to avoid distraction of hyper-local analysis when the Panel's intent is to provide recommendations for the whole of Lincolnshire:

Table 2 Case Studies - Rationale for Selection
A 'smaller town' to the north of the county and a town already undergoing a locally led review.
A BUA and an example of a coastal town with a seasonal economy with Towns Fund investment.
A BUA and example of an historic market town and major service centre.
The largest BUA and an important market town and service centre in the south of the county.

The Panel commissioned detailed analysis of the four towns. This was provided by OpenPlan. The main findings from the analysis are set out below and are considered applicable to all towns in Lincolnshire.

5.3   Case Study Lessons

The case study identified key themes to improve place and commercial interaction. The themes include:

- Supporting community involvement in place-making to drive ownership and connection of local people to local place and promotion of local distinctiveness as a key asset.

- Focusing on the assets of greatest value to users. In many towns this relates to revitalising/maximising use of market squares/key historic environments.

- Ensuring that:
   - car parking is accessible and can be found (signage/enhanced linkages) but avoiding car parking becoming a prime use of prime assets, it is a facilitator of town centre usage;
   - pedestrian and cycling connections are better integrated to access key spaces such as markets with the rest of the town - including employment areas close to, but outside of, town centres;
   - pedestrian priority and accessibility are achieved for people with disabilities; and

- the creation of 'social streets' leveraging pedestrianisation be supported, offering an environment where people dwell and spend their leisure time.

- Local residents and local businesses need to be directly involved in developing their town centres to create/reinforce a collective local vision and local identity.

- Spaces need to be animated (events, local markets) – local people need to be involved in how this is done and what products are developed. If there is a space that can become the 'go to' for successful events which has sufficient size, accessibility, facilities, and profile this should be developed.

- Where there are draws away from town centres (such as in coastal towns where the beach is a distance from the high street) linkages need to be promoted (physical and animation) to better link and connect the two assets.

- Promote local businesses wherever possible; and

- Provide support for educational institutions in town centres and the opportunity for residents to up-skill and for young local entrepreneurs.

6. Lincolnshire High Street Businesses - Challenges and Opportunities

6.1 Introduction

During the review, the Panel received contributions from the Federation of Small Businesses Lincolnshire (FSB) and the Lincolnshire Chamber of Commerce. The FSB is a membership organisation for the small business community in the UK, with around 170,000 members, from single-person businesses to organisations of up to 249 staff. FSB in Lincolnshire has 3,000 members and acts as a lobbyist for the small business community across Lincolnshire.

On 12 April 2022, the FSB published a report called *Local Leadership - How Local Authorities Can Support Small Businesses*[10].. The report made a series of recommendations to county and district authorities across the UK. In their presentation to the Scrutiny Panel on 26 April 2022, FSB focused on some of the national recommendations that would apply in Lincolnshire. Of those, we concurred that the below could be employed by Lincolnshire County Council to inform this review, accounting for the role of an upper tier authority. Details of all of FSB recommendations are included in **Appendix E.**

6.1.1 Engaging with Small Businesses

1. *Building direct relationships with the business community - face-to-face contact is important for building trust with small businesses and local business groups, fostering good long-term communication. This also includes meeting with businesses who may not have an obvious presence on the high street or physical business premises.*

Councillor Tracey Carter was cited as an example of someone who had built relationships locally and is well-connected to the business community in Holbeach. Being visible and showing representation from LAs was important both as a means of understanding issues and identifying if local government can assist. Businesses valued this contact.

6.1.2 Planning and Environment

2. *Embrace the 'al fresco' and allow businesses to make the most of their outdoor space by utilising new planning powers, where appropriate.*

It was noted the emphasis on more people dining outside since the pandemic, and the widespread emergence of a café and pavement culture. The Panel would support the FSB's

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[10] Available at Local leadership | FSB, The Federation of Small Businesses).

premiss to encourage this, where possible, through the planning system or other decision-making process, to allow businesses in leisure and hospitality to embrace the use of outdoor space. This would help drive the diversification of the high street to expand town centre leisure/hospitality functions quicker, making the high street look busier and enabling people to increase their dwell time - staying longer and spending more locally and adding to the visitor draw of town centres and in particular market towns.

6.1.3 Procurement

3. *Pay invoices within 30 days or sooner and ensure that these terms are passed down the supply chain.*

The FSB referred to some poor practices, where businesses had been waiting over 80 days for payment. Sometimes, businesses had to forgo 10% of the invoice if they wanted to get paid quickly. This was particularly prevalent during the pandemic but has endured beyond in some areas. The FSB is encouraging councils to set an example and to pay invoices within terms.

In the case of Lincolnshire County Council, the aim is to pay from 28 days of the date of invoice taking into account the 'No Purchase Order Number, No Payment policy'. Further, the Council seeks to work with local suppliers when appropriate. For contracts valued between £10,001 and £25,000 at least one local supplier will be invited to quote, and the local supplier chosen where they offer Value for Money. Above £25,000 to the Public Contracts Regulations Threshold (£213,477 for goods and services and £5,336,937 for works) at least two local suppliers will be invited to tender.

Nationally government is seeking to award £1 in every £3 to small businesses and this is mirrored in local government contracting to drive growth and benefit locally.

6.1.4 Regulation

4. *Adopt a "support first, enforcement second" approach across your regulatory services, with a focus on reducing the regulatory burden.*

The FSB's the national recommendation is "support first and enforcement second" approach, as some small businesses did not necessarily have all the skills and all the knowledge to manage every regulatory burden.

The Council provides a free general advice service to businesses and explains the law related to specific queries. The advice service is however limited to one hour but can be 'topped up' to address more detailed queries or where tailored advice is required on various subjects including safety of consumer products, legal requirements for websites and internet sales, food labelling, customer rights and business training.

The Council's Trading Standards service recognises that the majority of businesses set out with the intent to comply. The council has discretion as to whether to bring civil and, or criminal action and will do so based on whether it is satisfied that the circumstances of the alleged offence, in the context of one or more public interest factors, outweighs the mitigation factors.

6.1.5 Business Rates

5.   *Keep business rate lists and data up to date, including properties which qualify for Small Business Rates Relief. Good data is critically important for both the collection of rates and should grants need to be paid out to those in receipt of rates relief. Knowing who the business owner is, and how to contact them can be critical.*

The importance of keeping business rate lists and data up to date is acknowledged as an essential way of engaging and communicating with businesses and for maintaining information channels enabling for example the encouragement of *eligible businesses to apply for Small Business Rate Relief and to access any other form of support.*

The Panel noted and supported this based on the experience built up from the administration of grants and support during the pandemic when databases were used effectively to drive maximum take up and awareness of support.

6.1.6 Greener High Street

6.   *Create a 'greener' high street by encouraging zero or low emission transport methods, providing Electric Vehicle (EV) charging points, and highlighting accessible pedestrianised routes and spaces.*

As an example of this, use of EV charging points to attract people to town centres and to balance accessibility/connectivity needs with creating a greener high street.

The Panel heard about the LEVI Pilot in the county and supported the focus on smaller towns to test take-up/demand.

6.1.7 Absent Commercial Landlords

7.   *Tackle the problem of absent commercial landlords who allow empty properties to fall into disrepair.*

The FSB highlighted the number of vacant premises in towns, some of which had been left vacant for tax purposes, resulting in properties falling into disrepair. This led to vandalism and the perception of a 'sorry-looking' high street which was not performing well with the potential to deter investment.

The Panel noted that whatever can be done locally to tackle absent commercial landlords should be implemented in line with government initiatives and policies.

6.1.7 Parking

8.   Addressing parking would have the single biggest impact on bringing people back to town centres.

FSB surveys identified that 70% of small businesses felt that free parking, or at least easy access to parking, would make the biggest material difference to footfall and therefore to their income.   Whilst recognising this as a common 'business ask' it was not always possible for a variety of reasons including the provision of free short-term slots (30 minutes) – although it was felt that the latter could encourage regular spending in shops as people would be put off if they had to pay for an hour, when they only needed ten minutes.

In response to this, the Scrutiny Panel indicated that it was not in favour of timeless free parking as a general principle because free spaces could be used by those working in a town (including business owners), rather than by the shoppers.

The Panel did however support the premise of half hour on-street free parking spaces where it was possible. The Panel did however stress the importance of enforcement to make this work.

6.1.8 Access to banks

9.   Seventy-four percent of businesses had experienced bank branches closing in recent years reducing access to cash in more rural areas.

Banks had traditionally been seen as a bedrock for market towns and high streets, particularly in more rural areas. With branches closing this was disproportionately impacting the elderly and the vulnerable who still favoured cash and were unable/unwilling to move to online banking. This not only impacted footfall but also local businesses. Where cash was used, the businesses had no means of banking it locally, adding journey times, costs and increasing security concerns if this was not done on a daily basis. As Lincolnshire is large and rural sometimes the nearest bank could be forty minutes away.

6.1.9 Other Issues

Following 17 months of on-and off closure during the pandemic, this had not only impacted the business but had led to increased stress among the business owners themselves. Further, post covid businesses were also dealing with:

- recruitment and labour challenges including the affordability of staff;
- reduced footfall (in some cases);
- ongoing adjustments to changing consumer habits – including moves to online shopping;
- a business rate system that was 'antiquated' and awaiting review particularly in respect of re-rating;

- business rents volatility - 56% of FSB business members stated that rent levels had been an issue, with over half stating that if there had been rent regulation, it would have made things easier;

- Energy cost rises;

- Shifting payment trends away from cash to debit and credit cards (and associated costs of processing these payment);

- The impact of the loss of large retailers/anchor tenants in high streets that acted as a draw for shoppers; and

- Reduced accessibility to nighttime offers when linked to public transport services.

6.1.10 Optimism

The FSB's small business index (April 2023) looked more promising, despite the issues being experienced, with trends indicating the potential to exceed pre-pandemic levels. This is not an index focused specifically on the high street/retailing/hospitality etc and these sectors did in fact return negative confidence scores, the worst of all sectors. However, they were not as pessimistic as previous returns and reflected the fact that consumer spending had held up better than forecast. Nonetheless, there were revenue growth concerns due to the relative low-cost margins of the sector. Further UK wide, there was negative growth in employee numbers.

"Weaker growth aspirations align with the general economic uncertainty and low growth trajectory of the wider economy. Looking at businesses by sector, those in accommodation and food service activities are the least likely to anticipate growth over the coming year, with this being the case for just 17.8% of respondents. For the wholesale and retail sector, the net balance figure stood at 28.0%. Both sectors continue to face pressure from weaker consumer activity amidst declining living standards. Nevertheless, the share expecting growth in wholesale and retail is greater than was the case in Q4 2022, when just 37.5% of small businesses in this sector expected to expand over the coming year. This highlights the shift in sentiment between these periods"[11].

6.2 Business Support in Lincolnshire

The way that Business Support is funded is changing nationally. European funding came to an end in June 2023 and has been replaced with UK Shared Prosperity Funding (UKSPF) which has been allocated by the UK Government to lowest tier authorities. The overall aim of the UKSPF grant is to help restore a sense of community, local pride and belonging. As noted earlier in the report, supporting local businesses is highlighted as one of three central themes of the funding.

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[11] Small Business Index, Quarter 1, 2023 | FSB, The Federation of Small Businesses

In Lincolnshire, each district must make their own decisions about how UKSPF is allocated, depending on their knowledge of local needs. Lincolnshire County Council does not have direct access to UKSPF and has no alternative significant funding sources to deliver business support at scale through the existing Business Lincolnshire Growth Hub, which has developed over many years utilising significant amounts of European funding.

A Business Lincolnshire UKSPF Shared Service programme has been offered to all ten local authorities within the Greater Lincolnshire Local Enterprise Partnership (LEP) area which includes Lincolnshire, North and North East Lincolnshire and Rutland. Local Authorities can 'buy into' this service to meet their business support needs, in return for just over 5% of their UKSPF allocations. The UKSPF Shared Service offers a similar breadth of service to that currently delivered, albeit with fewer places. It includes a mix of generalist and specialist advice, specialist programmes and a workshop programme supported by a communication campaign. The programme continues to offer a ladder of progression for businesses from start-up to export to scale-up.

As of June 2023:

- five authorities have opted in – City of Lincoln Council, North Kesteven District Council, Rutland County Council, South Kesteven District Council and West Lindsey District Council.
- two authorities are finalising their application process and are still to confirm a decision – North Lincolnshire Council and North East Lincolnshire Council.

Enquiries from businesses in these areas continue to be supported through the existing Business Lincolnshire Growth Hub services, including the new UKSPF Shared Service from 1st July 2023 (pending a decision from North and North East Lincolnshire).

- Three authorities have opted out. These are Boston Borough Council, East Lindsey District Council, South Holland District Council.

Enquiries from businesses in these areas will now be managed by the respective Local Authority Economic Development Teams, who will identify appropriate business support solutions for the businesses in these areas[12].

In addition, some Districts are offering/considering additional support services for local businesses. For example, North Kesteven District Council wish to extend their net zero offer

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[12] All businesses regardless of their location, will continue to be able to access the many self-service tools and information available on www.BusinessLincolnshire.com.

with a dedicated Low Carbon Adviser and West Lindsey District Council have procured a Retail Sector Adviser.

Recommendation 2 (High Street Businesses)

We recommend that:

(a) That the County Council lobbies those organisations that restrict businesses and support further streamlining of administrative processes for town centre businesses, including licencing.

(b) That the County Council be supportive of High Street businesses by developing a Single point of Contact (SPOC) for town centre matters; and streamlining processes internally to support businesses.

(c) That the Growth Hub seeks to support an enterprise culture in town centres where services are available.

(d) That opportunities be considered through regulatory services, such as Trading Standards, to offer selected business advice to support town centre business start-ups.

(e) That a pilot be explored to '*keep the local spend local*', working with Lincolnshire County Council's procurement, partners and existing '*buy local*' initiatives.

7. Placemaking, Funding and Skills

7.1 Place

Frequently the concepts of place and placemaking were raised at our meetings. In this context, a *place* can be identified as:

- where people, location and resources combine to create a sense of identity and purpose.

Placemaking is:

- the collaborative process of turning a space into a place where it is desirable, relevant, and welcoming. In effect the art of addressing the needs and realising the full potential of a place and its communities whilst considering its design, location, infrastructure, services and most importantly, its residents and users.

We were told that places can be shaped by the way resources, services and assets are directed and used by the people who live in and invest in them. Hence, place is a more joined-up, collaborative, and participative approach to services, land, and buildings across all sectors within a place, enabling better outcomes for everyone and increased opportunities for people and communities to shape their own lives.

7.2 Placemaking

Placemaking can refer to a process of shaping public space. It is an important aspect of community engagement aimed at identifying assets and resources within a community and harnessing the ideas, skills and assets around the individuals that take part in the process. It helps to identify barriers that can be addressed to create strong and resilient and connected communities. Placemaking aims to build on and enhance a places local distinctiveness and to create bonds between people and place, in improving the quality of a place it will in turn benefit the wider community and region.

We were advised that by understanding the physical, social, and economic characteristics of a place, placemaking can create a positive impact on the quality of life for residents.

Thoughtful placemaking can create high quality spaces that are inviting, safe, and accessible for all. Additionally, placemaking can foster a sense of identity and belonging among residents. By understanding the community's strengths and weaknesses, placemaking can be used to create a space that is reflective of the community's values and character. From the

evidence before us, we have concluded that collaborative placemaking can be an instrument for accessing and transforming public areas into spaces for dialogue, integration, and democratic engagement. What is more, this can lead to the creation of healthier, safer, and greener places for our residents and places where businesses can contribute, benefit, and prosper.

We concurred that good practice involves:

a) an audit of all current and potential partners/active groups and organisations in an area to understand who the stakeholders and influencers are;

b) a review to determine if there is any synthesis in areas/interests/activities focusing on:

- o access and linkages
- o comfort and image
- o uses and activities and
- o sociability

(See diagram 1 below [13])

c) based on the outcome, the development and provision of support to facilitate a collective, cross sector vision and thereafter to align activity to it.
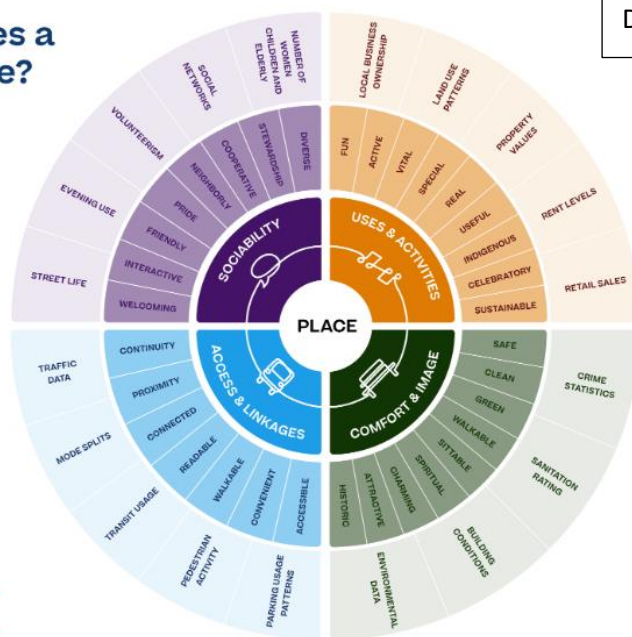
Diagram 1

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7.3 Self-Contained Places

As part of our evidence gathering, we received information on the concept of fifteen-minute and twenty-minute neighbourhoods. A fifteen-minute or twenty-minute neighbourhood is a neighbourhood where residents can access most (and in a few cases all) of their needs within a short walk or bike ride from their home.   In effect, such neighbourhoods can become as far as possible *'self-contained places'*. We stress that self-contained places are a matter of choice, as individuals are of course free to shop, engage in leisure activities or use certain public services wherever they wish.

The concept of *'proximity'* has been identified as a key barrier and a challenge to be overcome in contemporary towns and one that is associated with sustainability and viability of the built environment. The challenge became more prominent in the context of the pandemic.   As part of this, the concept of *'walkability'* arose, with reference to a vision for pedestrian walkable distance of complete and self-contained places.

> The key elements of a **self-contained place** in summary could be:
>
> ✓ development of a social and functional mix;
> ✓ engagement of the public (people living within a specific area) in urban planning processes (aimed at that specific area);
> ✓ improvement of walking and cycling infrastructures, and an aim to reduce the use of private vehicles for everyday local activities; and
> ✓ where appropriate, the decentralisation of core services with flexible uses.

The principle of 15-minute neighbourhoods is more usually associated with larger urban areas and supports local use and reduced carbon. Such tight neighbourhoods are difficult in smaller rural areas, but pioneering work has been undertaken in the Highlands and Islands with a slightly extended and proximate 'travel time' 20 Minute Neighbourhoods in the Highlands and Islands[14] and is also being developed in the East Riding of Yorkshire.

Concepts include embracing sustainable travel, using the 20-minute principle as a target, aligning community action and public and private sectors to support and deliver the principle through neighbourhood and/or local plans. Additionally, addressing action not just around the presence of buildings, facilities and transport but aligning around services, resources and community collaboration and all concepts of daily life (education, employment, housing, public services, access to outdoors, movement from rural to urban etc.)

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[14] For further information visit - https://nickwrightplanning.co.uk/20mns-highlands-islands.htm

7.4 Benefits of Self-Contained Places

The benefits of such a model are often cited as follows:

- Economic benefits – Self-contained places could lead to a boost to local economies across the seven districts, by encouraging more customers to shop locally, supporting more local businesses, in turn stimulating local employment.

- Environmental Benefits - Reducing long-distance travel has an environmental benefit, reducing transport generated emissions. Introducing greener spaces would enable new community assets and increases biodiversity.

- Health and Wellbeing benefits - Walkable places introduce healthier lifestyles. In addition, a greener environment is likely to have a positive impact on mental health, through opportunities for play and recreation for adults and children. Interactions within the local community can address isolation and loneliness. Improved air quality will also contribute to better health outcomes.

- Viability and inclusivity of Communities - This is a long-term aspiration that would facilitate local people spending more time with their social and family circle within their localities and where places are inclusive, accessible, and enjoyable for individuals of all ages and abilities.

7.5 Capacity Building and Skills

We were advised that placemaking 'capacity building' involves providing training and coaching, utilising best practices, and engaging with professional bodies and networks of key practitioners.

Options to take this forward include:

- Linkages to existing partnerships with professional memberships and organisations, such as the Association of Directors of Environment, Economy, Planning & Transport (ADEPT) that can provide additional support and expertise through programmes such as Excellence in Place Leadership; and

- The development of an internal toolkit and training programme aimed at supporting and understanding the importance of placemaking throughout the county council's services and utilisation of key toolkits and strategies including:
    - The Department of Transport's 'Gear Change – A bold vision for cycling and walking' looks at better streets for cycling and people, putting cycling at the

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heart of decision making, enabling people to cycle, and be protected and empowering local authorities to lead and implement change; and

o Homes England's 'Building for a Healthy Life' looks at integrated neighbourhoods with walking, cycling and public transport at its heart, distinctive places with well-defined streets and spaces and streets for all with blue green infrastructure, cycling and car parking and above all healthy streets.

> Through adopting capacity-building initiatives, Lincolnshire County Council should seek to promote a greater understanding and appreciation of the importance of place-making and equip the Council with the skills and knowledge needed to deliver high-quality outcomes. We believe that adoption and implementation of capacity building programmes (which would follow the European Regional Development Fund technical assistance model[15]) will support in place-making skills being diffused across services to deliver outcomes through training and champion programmes.

7.6   Becoming Place-Ready for Investment

The local authority strategic convening role involves creating a supportive environment that attracts commercial investment to areas. This includes working with local stakeholders to identify opportunities for investment and to develop a shared vision for an area's future.

To constitute a place investment ready, Lincolnshire County Council should undertake a range of activities, including infrastructure development, planning, and zoning changes, public-private partnerships, and work to identify and address barriers to investment, such as regulatory hurdles or access to finance.

7.7   Viability and Vitality

Drawing on the work of the High Streets Task Force, we accept that both viability (economic performance and yield) and the vitality of high streets are important. Further, there is more to the high street than retail. It can encompass health and fitness, leisure, housing, workspace, entertainment, arts/culture, and even education. We acknowledge that a high street with a wider offer is more inclusive and attractive to a wider audience.

We also acknowledge that economic viability is strengthened by integrated actions, governance, policy, and leadership to support social and cultural, technological, and

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[15] For more information on this model and operation visit - European Regional Development Fund

environmental aspects of the high street. The graphic (diagram 2) below sets out the inter-connectivity.

Diagram 2

Beyond economic viability

7.8   Survey of Town and Parish Councils

The Panel issued a short survey to 21 town and parish councils during 2022 to seek their views on their local town centres. They were asked to provide the following information:

- the current state of their town centre, including changes over the last five years and the impacts of the pandemic;

- initiatives or events to stimulate footfall or activity in the town centre and examples of good practice to increase activity in the town centre; and

- other issues related to their town.

7.9   Findings of the Survey

Ten councils responded (Alford, Coningsby, Crowland, Holbeach, Horncastle, Long Sutton, Louth, Mablethorpe and Sutton, Market Rasen and Sleaford). We have identified the following themes from these responses:

- Town / parish councils are generally supportive of local initiatives and organisations, promoting a range of activities in their areas. These initiatives can include the voluntary sector and local businesses.

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- The loss of retail bank branches has impacted town centres, as their premises can remain empty, and footfall has fallen because of their closure.

- There is a variation on the impacts of town / parish centres, with one reporting no empty retail premises. Several respondents identified empty premises as a negative feature, as too many empty premises create a less attractive environment for people visiting the town centre. Nevertheless, in one response, a difference between perception and actuality was cited – in other words the view that there are lots of empty premises is not necessarily supported by data.

- Several responses refer to issues such as managing housing development, conservation areas and planning enforcement as examples where there could be improvements (noting that these are District functions).

- Funding challenges across the public sector have been recognised, for example the availability of funding from the County Council and the district councils. Similarly, the availability of funding from other sources has reduced.

- Parking has been identified as an issue (cost and availability).

- Improving public transport and providing facilities for cyclists; and

- There is an acceptance that the composition and role of high streets will evolve from the traditional retail function to more varied services and facilities, for example, leisure, and even housing.

The Panel has selected the following from the survey as examples of good practice. However, in each case these ideas are beyond the remit of the County Council in terms of resourcing or actioning.

- Town Councils assuming responsibility for off-street parking.
- Digital Initiatives:
  - ➢ QR Code linking to town websites.
  - ➢ Town digital notice boards
- 'Shop-Local' Leaflets
- Footfall counters to understand numbers and town centre usage patterns.
- Mural art to make the environment more attractive.
- Repurposing former bank buildings and/or creating Banking Hubs, and
- Restoring disused public sector premises for community use.

7.10 Our Conclusions on Place-Making and self-contained places.

We believe that Lincolnshire's market towns and larger villages support or have the scope to support the basic principles of self-contained places, as many of Lincolnshire's towns and villages have a range of retail outlets, a post office, a GP surgery, pharmacy, and various community facilities. However, we acknowledge that for many people in market towns and villages they need to travel for these and other essential services. In addition, people have a choice, and are entitled to use any of the facilities in neighbouring towns. Furthermore, Lincolnshire's communities vary significantly in nature (urban or rural) and purpose. Our communities are not only defined through essential services, but also by characteristics, such as location, history, local economy, and demography.

The principles of self-contained places and placemaking align with the Lincolnshire County Council vision, 'working for a better future' by "*supporting high aspirations; enabling everyone to enjoy life to the full; creating thriving environments; and, providing good value council services"[16]*. However, the council cannot in isolation deliver this in terms of expertise, funding and the decision-making powers required. The role of partnership outlined earlier in the report is essential to delivering this together with community engagement and capacity building.

Having considered all the evidence, the Panel has concluded that there is a role for placemaking and self-contained places in Lincolnshire, as a means of improving the livelihood, viability, and prosperity of Lincolnshire town centres. We feel that efforts should be made to prioritise the principles of excellence in placemaking across services as a key means of maximising economic, social, and environmental outcomes in our Lincolnshire high streets.

> ### Recommendation 3 – Placemaking, Funding and Skills
>
> **We recommend: -**
>
> (a) That Lincolnshire County Council work with North Lincolnshire Council and North East Lincolnshire Council to recognise the vital role of market towns in Greater Lincolnshire and to review opportunities for appropriate funding and budgets to support their viability and vitality (including infrastructure provisions) as a key ingredient in growing the economy of Greater Lincolnshire (referenced in Section 4 – Leadership and Strategy).

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[16] For more information, please refer to Lincolnshire County Council Corporate Plan

(b) That the County Council encourage good design across town centres through its development management functions and through partnership working with teams at Local Planning Authorities and other stakeholders.

(c) That design excellence, local distinctiveness, and character of town centres are encouraged through partnership working (under guidance from the Historic Places Team); and that quality public realm offers/green spaces are created to provide residents and visitors with the opportunity to increase dwell time and to support health and wellbeing objectives and help develop Lincolnshire's visitor economy (this links to Recommendation 2b).

(d) That consideration be given to each County Councillor receiving a £3,000 budget to support local activities aimed at increasing town centre footfall. Funding to be allocated through an established criteria and aligned to the work and findings of the LTBs (this links to Recommendation 1).

8. Technology, Innovation and Digitisation

8.1 Applications of Technology

We were advised that technology enables a wide variety of benefits:

- **Using spaces differently** – use of technology to make town centres environmentally friendly and sustainable and to understand the usage of spaces and how they can be improved.

- **Business support** – digital innovation can facilitate the changing needs of customers including online retailing and the skills needed for businesses to adapt and implement it as well as ways to increase an area's digital presence and showcase it as a place to use and visit.

- **Connectivity with heritage** – use of digital technology to connect people with a town's assets (relating to the Extensive Urban Survey work of the Council).

- **Traffic management** – use of technology to understand trends and to support town centre traffic management. For example, sensors can be used to monitor traffic flow, and variable message signs can be used to provide real-time information to drivers; and

- **Parking** – electric vehicle charging points and use of payment technologies (such as app-based solutions) to optimise residents and visitors' experience in our towns and high streets.

However, digital connectivity, digital skills and access to digital mediums are required. The Panel recognised the importance of technology to support sustainable uses, business resilience and growth opportunities and to enable new markets/audiences to be accessed. Lincolnshire County Council has a unique opportunity to leverage its digital and electric vehicle infrastructure leadership and contract management roles to support this.

8.2 Broadband

94.7% of premises have access to superfast broadband in Lincolnshire (>24Mb/s[17] download speeds). This is expected to rise to the national average of 97% during 2023 because of the existing Building Digital UK[18] (BDUK) contract. Gigabit coverage currently sits at 36.6%[19]. The

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[17] Mb/s = Megabyte per second.
[18] For more information please refer to Building Digital UK
[19] Further information on coverage at a specific address can be found at BT Broadband (btwholesale.com).

Council will be extending their ongoing BDUK contract to cover a further 2,500 premises in addition to the current 8,000. The 10,500 premises will receive download speeds of >100Mb/s as a minimum, with many getting >1Gb/s[20].

To create the right conditions for business growth partiularly in the high street, digital connectivity is essential. This must be scalable and future proofed provision with access, speed and capacity to support the needs of businesses and addressing digital inclusion for all residents. This can be a challenge in rural areas where businesses can often miss out on higher quality connections.

Without public investment to incentivise broadband proviers – in largely rural areas – there will be disadvantage and ongoing digital exclusion. This will particularly impact the growth and sustainability of micro businesses and SMEs (98% of the Greater Lincolnshire business base) many of these are high street businesses.

There are also needs in the visitor economy to enable the product to be developed further particularly in sparse or rural areas including access to mobile apps that will support resident engaement, increase the visitor offer and suport businesses and cutural and heritage engagement. To this end two pilots to 'digitise the high street' are referenced further in Section 10**.**

8.3 Project Gigabit

The government's Project Gigabit[21] seeks to increase capacity to at least 85% of premises by 2025 and 100% by 2030. A bid is being made to BDUK's GigaHub Scheme[22] to connect 150 public buildings in the county.

The Council is working with suppliers to further expand community fibre broadband schemes under the existing Rural Gigabit Connectivity scheme. There are currently several large schemes in various stages of development which are expanding the number of communities involved.

The government is providing up to £210 million worth of voucher funding[23] as immediate help for people experiencing slow broadband speeds in rural areas. The Council is actively encouraging individuals and businesses to take up the scheme. There is also the fibre-to-the-premises scheme focusing on the south in Stamford, Deepings, Boston, Bourne, Grantham, Spalding, and Sleaford.

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[20] Gb/s = Gigabit per second
[21] For more information refer to Project Gigabit Delivery Plan: winter update - GOV.UK (www.gov.uk)
[22] For more information refer to GigaHubs: key information - GOV.UK (www.gov.uk)
[23] For more information refer to Gigabit Vouchers (culture.gov.uk)

We, however, noted that whilst gigabit speeds are game changing, the government's 'workable speed' of 30Mb presents challenges to inclusive growth and town centre suatainability, especially when there are significant numbers below that speed.

In summary, we recognise the vital role of superfast broadband, and note the important role that the authority plays in providing better access for businesses and communities. We feel that as an authority Lincolnshire County Council must take a firm view on developments and on the visual impact of some 5G infrastructure, and therefore lobby the government so that planning authorities have a greater say in the siting of 5G infrastructure.

Recommendation 4- Technology, Innovation and Digitisation

We recommend that:

(a) That Lincolnshire County Council takes a firm view on developments and lobby government so that planning authorities have a greater say in the siting of 5G infrastructure.

(b) That the County Council support initiatives to drive digital skills amongst people who work in town centres, where appropriate.

(c) Lincolnshire County Council test community and visitor opportunities to '*digitise the high street'*, working in partnership with local areas to ensure content is created and managed in real time, along the lines of the pilots currently being developed in Holbeach and Mablethorpe (this will build on the work of the Council's Historic Environment Team and look at other opportunities to animate spaces including the use of pop-up museums).

9 Data Driven Decision-Making and Targeted Investment

9.1 Data and Place

The Panel acknowledges that data is imperative in developing our learning and understanding of our towns, villages, and high streets. It is essential in making cases for scaling up successful activity, bidding for external funding and making business cases for new activity. Collating data about our places, including those of businesses and other key stakeholders plays an important role in knowing our places and understanding why people visit our towns and how they use the spaces. This information, in conjunction with 'perception data', will help differentiate between the needs of residents and those of visitors and where those needs align.

This information can be important for attracting new investment into town centres. Further, profiling town centres is more than getting people into shops, it is also about attracting skilled individuals from outside of the county to live in Lincolnshire, because of attractive market towns and town centres providing the environment for everyone to 'live, work and play' (Vision 2050).

The evidence presented by the FSB and the Chamber of Commerce earlier in the report indicates that joining forces with businesses and partners on a localised level, sharing information and exchanging data will be of mutual benefit not only in assessing trends, creating foresight of needs (especially unmet needs), but also helping to monitor the impact of decision making in 'real time' enabling greater agility and resilience in interventions.

9.2 Use of data in Lincolnshire towns

We considered information in relation to the County's visitor economy. We were advised that the Council uses the Scarborough Tourism Economic Activity Monitor (STEAM) to quantify the local impact of tourism. STEAM is widely accepted by the industry as an evaluation model and harnesses data from a variety of sources including hotels, venues, and attractions. STEAM quantifies the local level of both overnight and day visitors, through analysis and use of a variety of inputs including visitor attraction numbers, tourist accommodation bed-stock, events attendance, occupancy levels, accommodation tariffs, macroeconomic factors, visitor expenditure levels, transport use levels and tourism-specific economic multipliers.

The Panel is confident that ongoing use of STEAM data will allow Lincolnshire County Council to better understand visitor trends and develop collaborative solutions to increase day visits and overnight stays to Lincolnshire with a focus on towns.

Many towns have footfall counters. This information, where available, can help inform decision making in terms of where footfall is increasing/decreasing, fluctuations during the week – perhaps spiking in line with a key event or market. These can also identify pedestrian flow and when footfall is at its peak e.g., summer season. This could be vital to informing partnership activity to support planned interventions in town centres.

In the Technology, Innovation and Digitisation section earlier in this report, there is reference to traffic management technology and to electric vehicle charging points as part of the LEVI pilot. This will also collect data (where anonymised) which will also inform interventions and decision making.

Furthermore, the Virtual Immersive Environment (VIE) pilots (further reference in Section 10) will use data to determine the effectiveness of the intervention in terms of use/take up, effectiveness and issues relating to access and connectivity. This data, as with all pilots, will inform a stop/go approach to next steps and if the initiative is considered value for money, the data will inform the adaptation of the product and the costs involved in set up and maintenance, should it be rolled out to other towns.

> **Recommendation 5- Data-Driven Decision Making and Targeted Investment**
>
> **We recommend that:**
>
> That data and lessons captured through pilots, including digital highstreets and Local Electric Vehicle Infrastructure fund are used to inform better business cases to support interventions and investments in town centres.

10 Heritage and Visitor Economy

10.1 Lincolnshire Extensive Urban Survey – Heritage

The Panel reviewed the Extensive Urban Survey (EUS) project recently completed by the council's Historic Places Team. Part of a national programme funded by Historic England, the aim was to better understand the historic development and its influence on the character of Greater Lincolnshire's towns. The survey included a total of 30 towns, with the County Council working in partnership with North Lincolnshire Council and North East Lincolnshire Council.

The EUS has produced historic urban character assessments focused on the evidential, historical, aesthetic, and communal attributes of the individual towns surveyed. This has provided an opportunity to look at the modern-day town at the hyper local level and used digital mapping to plot the changes in the towns over time. More details on the findings of the survey may be found in Appendix H**.**

The Panel recognises the value of the EUS project and the information and data that it has collected. There is value in using the information to showcase Lincolnshire towns by promoting tourism, supporting local planning; enhancing community engagement; and providing educational resources.

The benefits of this work demonstrate the distinctiveness of each town with supporting maps and digital maps for each of the thirty towns covered. Various benefits and interdisciplinary opportunities were discussed, and the reports provide a data led approach to support future place shaping.

The EUS information is currently being used to develop two high street digitisation pilots that the Panel has recommended be developed to support further actions (Recommendation 2e).

The two pilot projects are being developed in Holbeach and Mablethorpe, which were selected due to:

- funding opportunities targeted in these areas;
- the availability of historical evidence and mapping from the EUS, and
- the opportunities to demonstrate specific outcomes in these towns with Mablethorpe harnessing community development and local history learning and Holbeach adopting a pilot focused on business engagement.

The aim is to create a virtual immersive environment (VIE) for both high streets with the objective of driving new footfall, encouraging new visitors, and re-engaging the 'place' with the local community.

The VIE will have interactive hotspots that will reveal some of the hidden histories of the high street's architectural and social past. The VIE will be a digital creation of exterior spaces and produces a self-led tour of a space or place and can be viewed online or via a mobile device.

Information hotspots or points of interest can be added via text, images, videos, and audio. Multiple copies of a space can be created with hot spots adapted to appeal to a particular audience, for example to businesses or residents.

In Mablethorpe an underspend on the Coastal Communities Fund programme is being used to support digital reimaging of the high street. This will look to engage schools and students in content creation and harnessing local history components in the Key Stages 1/2 national curriculum. Pupils will engage with family members to collect local stories and develop an understanding of 'place identity and its heritage'. These stories will support the story telling.

In Holbeach the focus will be around providing businesses with an opportunity to advertise events and offers and the potential to operate local discount schemes. Whilst telling residents and visitors the hidden story of Holbeach, it will also function as a mobile town notice board.

Other links to heritage were discussed by the Panel including the use of pop-up museums in vacant properties to both animate the space and engage resident and visitors with local heritage stories. Opportunities to undertake more of this type of activity would be welcome, subject to accessing appropriate external funding.

10.2   Visitor Economy

Market towns make a significant contribution to the visitor economy in Lincolnshire, both in terms of attracting tourists to that town and being a fundamental part of the offer of the wider hinterland. In the case of Lincolnshire, this is particularly true for those seeking active walking and cycling holidays on the coast or in the Wolds for example. Tourism and hospitality are also a source of employment in market towns.

Market towns attract a significant amount of tourism spend from visitors who come to explore the area. This includes spending on accommodation, food and drink, attractions, and shopping, which in turn supports local businesses and boosts the local economy. The presence of extra visitors creates more of a buzz in a town and adds to its vibrancy.

This also increases local employment opportunities in market towns, ranging from jobs in hotels and restaurants to positions in tourism-related businesses including attractions and venues.

Market towns often have a rich heritage and unique character that makes them attractive to visitors. In Lincolnshire there is a wide breadth of heritage and many of the smaller market towns are historic urban settlements of interest to visitors. The tourism industry, in turn, can help to preserve this heritage by supporting investment in the restoration and maintenance of historic buildings and landmarks led by the private sector.

Market towns often host a variety of events and festivals throughout the year, from farmers' markets and craft fairs to music festivals and cultural celebrations. These events can also attract visitors from outside the area and help to boost the local economy. In Lincolnshire examples include the Beyond the Wood's Festival (Horncastle), the 1940's Festival (Woodhall Spa), the Holbeach Music & Beer Festival, and the Forbidden Forest (Grantham). The CEO of the Lincolnshire Chamber of Commerce advised the Panel that collaboration in towns was key and that opportunities to link festivals and events to attract tourists and encourage them to stay longer should be explored – creating complementarity and not competition.

In Lincolnshire, tourism is a priority economic sector and as such is critical to the economic prosperity of the county. The Lincolnshire visitor economy was worth £2.49 billion in 2019, falling to £1.24 billion in 2020 and recovering to £2.03 billion in 2021, not quite pre-pandemic levels but displaying a degree of resilience. In 2021, there were 22.7-million-day trippers to Lincolnshire, a reduction of 26% compared to pre-pandemic levels, but an increase of 58% on 2020.

The presence of a thriving tourism industry can help to attract investment into market towns, including funding for infrastructure improvements (as referenced earlier through the SIDF) and the development of new tourism-related businesses and with them jobs and a higher quality of place for residents.

The Destination Management Organization (DMO) for the county is Visit Lincolnshire (www.visitlincolnshire.com). Their website and work in promoting Lincolnshire as a destination is key, the DMO 'captures' the staying visitors and day visitors and everything leads from there.

Some of the key elements that contribute to creating a vibrant mix that attracts visitors to a market town, includes:

- **Historic character:** Market towns that have preserved their historic character and architecture can be very attractive to visitors, creating a sense of charm and uniqueness that is difficult to find elsewhere.

- **A range of independent shops:** Market towns that have a diverse range of independent shops, boutiques, and artisanal businesses can be very appealing to visitors, as they offer a unique shopping experience that is different from the homogenised offerings of larger towns and cities.

- **Markets and events:** Markets and events can be a great draw for visitors, creating a lively, festival type atmosphere that encourages people to linger and explore. Farmers markets, craft fairs, and food festivals can all be effective in attracting visitors.

- **Cultural attractions:** Market towns that have high quality cultural attractions, such as museums, galleries, and performance venues, can provide a draw to visitors who are interested in learning about the history and culture of the area.

- **Natural beauty:** towns that are located / are proximate to areas of natural beauty, such as the countryside or by the coast, are more attractive to visitors who are looking for a relaxing break or want to combine it with walking or cycling activities.

- **Food and drink:** Market towns that have a thriving food and drink scene, with a range of pubs, cafes, and restaurants, can be very attractive to visitors who are looking for good quality, locally sourced food, and drink.

- **Walkability and accessibility:** Market towns that are easy to walk around and have good public transport links can appeal to visitors, as they offer a convenient and stress-free way to explore the town and the surrounding area.

The Panel also acknowledged other key learnings, including that:

- It is crucial to know your visitor and what they want out of a visit so that you can adapt an offer or leverage a key asset.

- Locals, like visitors, want cleanliness, a good range of shops including independents, and eateries.

- Day trippers exceed overnight visitors in numbers and are worth £940 million to the local economy, whilst fewer staying visitors add significantly more contributing £1.08 billion to the economy. Staying visitors want variety which includes heritage,

shopping, walking, cycling, and bird watching. Packaging of these elements is being developed further by Visit Lincolnshire. To support this work:

- o Walking and cycling facilities are required including safe cycle storage. This is referenced in Section 11, Recommendation 6b) and

- o The availability of walks is being digitally developed on special webpages of Walking on Visit Lincolnshire[24]. When complete the Coastal Path will have its own area as will the Viking Way which is currently undergoing several route improvements.

- Effective parking provision, signposted and accessible must be available. Pay on exit arrangements are preferable to encourage longer dwell time and, as referenced earlier in the report, short periods of free parking encourage a churn of visitors.

10.3 Green Tourism – Ambassador and Toolkit Offer

The Council is already working with tourism businesses to develop their green offer, and this is likely to be increasingly appealing to staying visitors.

The Council has already piloted a green tourism toolkit[25] with coastal businesses which has been rolled out in 2023. There is an opportunity to adapt this specifically for market towns. The Toolkit is divided into People, Planet and Place and is supported by training and an ambassador programme.

The key findings from the pilot showed that many businesses had a very narrow view of what 'going green' entails and this was a barrier. The training addressed this perception and provided a forum for businesses to share and discuss problems and solutions. The opportunity for businesses to be Green Ambassadors after completing the course and getting a plaque was seen as a massive draw for the business participation. Collectively, green tourism and a form of accreditation although not unique, help sets the offer apart and differentiates it from other tourism products.

Market towns offer a variety of opportunities to leverage green tourism coupled with their heritage offers and proximity to walks, cycle routes and green spaces including the Wolds Area of Outstanding Natural Beauty (AONB), Sites of Special Scientific Interest (SSSI's) and nature reserves. The Green Toolkit could present an opportunity to communicate this in a co-ordinated way, putting the market town as the destination in a wider offer. When working together, towns can also leverage complementarity not competition as referenced earlier in the report.

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[24] For further information visit - Walking - Visit Lincolnshire
[25] For further information visit - Green Tourism Toolkit - Business Lincolnshire (visitlincolnshire.com)

Dependent on the results and in line with work to develop the towns area on the Visit Lincolnshire website, there could be opportunities to take this a step further by including the development of a town level green indicator. This would help in identifying natural and heritage assets and promoting other 'green provisions' such as the percentage of businesses participating in the green ambassador programme; levels of secure cycle storage; Electric Vehicle charging provision etc.

In addition to the obvious benefits of green tourism training and the ambassador programme, increasing numbers of people are seeking green products and services – there is a proven consumer demand particularly with younger audiences and it can be a key ingredient to staff recruitment and retention, again particularly with younger people.

As a key ingredient of business sustainability, there is a shift towards focusing on the local area, green businesses have the potential to create a whole host of positive impacts for their local area including:

- Celebrating a sense of place in promotional materials and collaborative promotion of green businesses;

- Enhanced engagement between businesses and cultural heritage networks;

- Employment of local staff;

- Business generated initiatives to support wildlife and plant life;

- Opportunities for staff and customers to be more environmentally aware;

- Engagement of staff in sustainability initiatives;

- Adoption of responsible purchasing policies;

- Percentage increase of goods and services provided by local suppliers;

- Monitoring/management of energy and water consumption with the objective of reducing it;

- An increased focus on the circular economy and in particular the waste hierarchy: refuse, reduce, reuse, repurpose, recycle; and

- Supporting local walking and cycling.

10.4 Our Conclusions on Heritage and the Visitor Economy

The Panel recognises the importance of supporting and maintaining the Lincolnshire visitor economy as a key element in securing the future of our high streets and market towns.

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Not knowing enough about a place is the key reason for not visiting (2017 Non-Visitor Research). It is not that Lincolnshire doesn't offer what visitors want, but that they do not always know what it has to offer. The analytics for Visit Lincolnshire increasingly show an interest in searching for 'market towns' to visit. Ways to convert searches to visits are being developed still further with video content, additional text, and photographs. This should not be just about what the town has to offer, it should be seen as a base, cross-selling nearby attractions. For example, Louth can be sold as an excellent base for visiting the new King Charles III National Nature Reserve and the King's England Coastal Path.

The Panel welcomed that the Visit Lincolnshire portal had been established and saw opportunities to cement and enhance it as a centralised place for mapping Lincolnshire's cycling and walking routes and linking that 'offer' to that of market towns.

This can be enhanced by the Council in collaboration with district partners in the form of local apps to promote local offers. The pilots to 'digitise the high street' will offer further learnings to engage businesses, residents, and visitors with specific town *offers* utilising heritage knowledge and data captured though the EUS and will help cement a sense of place.

The Panel also recognises the widespread opportunities that green tourism can afford the high street and in particular Lincolnshire's market towns. To this effect a recommendation on Green Tourism is included in Section 11.

11 Green Growth

11.1 Net Zero

The government published its Net Zero Strategy in October 2021. This set out how the country will deliver its commitment to reach net zero emissions by 2050 through a variety of activities, tools, initiatives, and projects.

The strategy also lays the foundations for businesses to invest in the UK's green economy, taking action to ensure that the UK has the right skills to deliver a green industrial revolution and committing to work with industry to develop sector and supply chain action plans in areas where the UK has an economic advantage.

11.2 Local Strategies and Programmes

Opportunities to deliver net zero in Lincolnshire are referenced in the Council's Green Masterplan. Managed by and Environment Programme Board the plan looks at addressing the most pressing actions to reduce carbon and our impacts on the environment. Over the period to 2030, the County Council and its partners will deliver a carbon management plan aiming to reduce carbon emissions by 5,700 tonnes by 2023 (phase 1) and to deliver a heat decarbonisation plan, instal low energy LED[26] lamps in streetlights an create a sustainability decision making tool to ensure that sustainability is considered in council decision making.

The SIDF meanwhile focuses on decarbonisation and other responses to climate change that support sustainable growth and help achieve Net Zero targets. This is in the context of enabling innovation in low carbon technologies and renewable energy particularly in zero emission vehicles, mass transit and the decarbonisation of rail travel.

It is recognised that towns and high streets offer a significant contribution to achieving net zero targets through transitioning. This could also support green growth.

Town deal activity supports net zero transition and net zero targets are embedded within the principles of Devolution for Greater Lincolnshire which in turn will support the green recovery of the high street and programmes such as LEVI scope out opportunities to deliver electric charging in rural areas, market towns and urban centres.

District councils have all developed capacity to deliver environmental and sustainability outcomes, this is largely focused on internal carbon reduction plans and housing retrofit programmes supported by annual funding allocations.

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[26] Light-emitting diode bulbs.

The South and East Lincolnshire Council Partnership has established the South and East Lincolnshire Climate Action Network to work with businesses and communities.

11.2 Opportunities

Activities that the Council can add value to in this space over and above the plans and activities outlined in 11.1, are varied.

Easy fix opportunities to explore include:

- Scaling up the Council's Zero Carbon Parishes project – building on the success of this, there is scope to expand this and support environmental installations and initiatives in key towns as a start point to 'going greener'. Examples of previous activity includes a public water drinking fountain, a bike repair scheme, and a variety of biodiversity projects.

- Provision of a Green Hospitality and/ or Retail Guide - promoting independent businesses at the Lincolnshire level. Through this business commitment and action on a wide range of "green issues" that align with the Council's Green Masterplan will be demonstrated and linked with its benefits for the visitor economy and visitor experience.

- In response to the lack of bike parking sites in towns and in the context of the Panel's support to improving connectivity in towns and encouraging cycling – undertake a programme of providing Sheffield stands (a cost-effective provision).

11.3 Circular Economy

The circular economy is a model of production and consumption whereby products are shared, leased, re-used, repaired, refurbished, or recycled for as long as possible. It is a model which moves away from fast fashion, fast consumption, and disposal, and from the current linear economic model based on '*take, make, dispose'*.

Any transition to a circular economy will require behavioural change and addressing geographic barriers (particularly in a rural area). Piloting real life examples and processes will help residents and businesses understand the benefits and further refine understanding and practical opportunities.

Recommendation 6- Green Growth

We recommend that Lincolnshire County Council: -

(a) Develop a digital Green Retail/Hospitality Guide aimed at supporting independent businesses.

(b) Improve facilities to encourage bike use on high streets (basic Sheffield stands) – linking to the work of the LTBs.

(c) Encourage the use of service budgets to improve outcomes through investing in pilot activity, where benefits are aligned to the County Council's aspirations for inclusive green growth.

12 Conclusions

A wider review of Lincolnshire town centres and high streets was needed to consider how Lincolnshire County Council could support Lincolnshire's high streets to maximise existing opportunities, to achieve economic and environmental sustainability, to recover from the pandemic and to help stimulate a visitor economy as well as to support job creation in town centres. This was in the context of other key players and authorities also delivering change in the high street, coupled with changes catalysed by consumer behaviour and national and regional economic performance.

The Panel considered a vast amount of varied evidence over the 14-month review period drawn from a combination of interviews, presentations, policy and best practice reviews and engagement with specialists from local communities. The Panel also commissioned case studies and surveyed stakeholders.

The Panel's conclusion is that the high street is not dying but nor is it thriving. There are huge variations in performance across the county and this is dictated by a town's retail and hospitality offer, its location, accessibility, connectivity, and investment in that place as well as external factors such as the wider economy, the cost-of-living crisis, and the lasting impact of the pandemic.

There is no silver bullet and no one stakeholder holds the solution. Only collaboration, co-operation and co-ordination through strong leadership and a shared vision can begin to provide the right support at the right time to Lincolnshire's towns.

This said there are huge opportunities in our high streets – harnessing their unique sense of identity, their heritage, working with businesses and communities and harnessing their pride in their places, knowing our audiences and being aspirational. The Panel sets out in the report that "(…) *there are opportunities in Lincolnshire to consolidate, expand or develop place-based activities that will create town centres that attract people to visit, shop, socialise and do business*". Holistic actions to present the high street at its best are needed.

The Panel's recommendations are strategic and seek to add value to developing vital and viable town centres in Lincolnshire, these are cognisant of budget constraints across the public sector and largely focus on leadership and facilitation to create an environment for change that responds to the local needs of each town. They are also future facing in terms of net zero and use of technology. There is also particular recognition of the symbiotic interplay between market towns and the visitor economy bolstered by unique heritage and natural assets or proximity to such.

The Panel believes that the Council in the roles of a place leader, convener and influencer can help drive positive change in Lincolnshire's high streets aimed at making them more diverse in use, resilient and adaptable and to promote them to new users as thriving, exciting places where residents and visitors can enjoy new experiences and where businesses can succeed, and local employment opportunities can grow.

Our recommendations as set out in the main report, are now at the disposal of Lincolnshire County Council Senior Leadership and Executive Members and reflect where the County Council can add value to the activity of other stakeholders and prioritise activity based on its strategies, budgets, and capacity.

13 Key Contributors

Scrutiny Panel A would like to thank the following contributors and officers for their advice and support during this scrutiny review:

- Councillor Colin Davie, Executive Councillor for Economy, and Place
- Councillor Tom Dyer, Executive Support Councillor for Economy, and Place
- Justin Brown, Assistant Director – Growth
- Vanessa Strange, Head of Infrastructure Investment
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- Warren Peppard, Head of Development Management
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- Ian George, Historic Places Manager
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- Steve Kemp, Director, OpenPlan
- Kiara Chatziioannou, Scrutiny Officer – Project Manager for Scrutiny Panel A
- Simon Evans, Health Scrutiny Officer
- Nigel West, Head of Democratic Services and Statutory Scrutiny Officer
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Further Information

If you would like to find out more about this Scrutiny Review or Overview and Scrutiny at Lincolnshire County Council, please contact the Scrutiny Team at scrutiny@lincolnshire.gov.uk.

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TOWN CENTRE IMPROVEMENTS

Appendices

Evidence Considered by Scrutiny Panel A on behalf of the Environment and Economy Scrutiny Committee

July 2023

Previous Scrutiny Activity

The Panel considered the following information from previous scrutiny reviews.

April 2019 Environment and Economy Scrutiny Committee, Item 8 - High Street Revitalisation

The High Street Vitality Working Group report surmised:

- High Streets were changing rather than dying.
- The transition from predominantly retail spaces was to places for leisure, visiting, living, and shopping.
- The Working Group lobbied for changes to planning to support High Street adaptation and changes in Business Rates.
- Five further **recommendations** were made:

  - Collaboration between Districts and the County Council was essential.
  - That all partners recognised the importance of a clean, green, and accessible High Street environment.
  - Recognition of the importance of engaging and supporting the private sector to understand changing consumer behaviours and possible responses– retailers, landowners, property owners and housing organisations – through collaborative business support programmes.
  - Supporting the County Council and Local Planning Authorities to champion ways to support (largely through Local Plan revisions) ways for each Lincolnshire town to complement and not compete with its neighbours (in terms of offer).
  - Work to engage young people to lead social media campaigns to encourage residents and visitors to use their market towns more.

1.1.1 **July 2021 – Environment and Economy Scrutiny Committee Report, Impact of Covid-19 on Lincolnshire's High Streets**.

The Environment and Economy Scrutiny Committee considered the below:

- Function and form of High Streets and the role of the public sector.
- How working from home, internet shopping and home deliveries had removed people's dependence on town centres and whilst a trend seen for some time, Covid-19 had made this change 'revolutionary rather than evolutionary'.
- Balance between the role and interplay of town centres and the community – with town centres as a place to go, that provided a sense of belonging, a focal point with heritage, culture and local distinctiveness and identity.
- The Committee's areas of focus included:

- o **Use of publicly owned buildings and land to increase footfall, including the provision of "hubs" in town centres.** The report suggested that many people were now seeking a place to drop into to work and to meet – perhaps for half a day. Digital hubs were physical spaces with access to superfast broadband alongside community and business focussed services.
- o **Members views and experiences of their local towns** following the pandemic and whether businesses in their divisions were working differently following the pandemic.
- o **The impact of absent landlords/vacancies.**
- o The repurposing of shops and empty spaces for **housing.**
- o The **pedestrianisation** of high streets and other improvements such as reducing traffic congestion, improving air quality and increasing parking.
- o High Streets and Market Towns as **'destination' areas**.
- o **Collaboration** and joined up and joint working between local councils to coordinate improvements.
- o The positive impact of the new **Local Transport Plan V** for Lincolnshire.

All the information highlighted by the reviews in April 2019 and July 2021 was used and built upon during the course of our investigations in 2022/23.

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Government Funding

Government Funding in Lincolnshire

There are four streams of national funding, which have been allocated to Lincolnshire.

(1) **Levelling-Up Fund: £187 million** (LUF 1) in round one and **£2.1 billion** in round two (LUF 2), on three themes: regenerating town centres and high streets; (ii) upgrading public transport; and (iii) investing in cultural and heritage asset.

(2) **UK Shared Prosperity Fund**: **£2.6 billion** to 'restore local pride across the UK' by providing three main areas of investment: (i) improving communities and places; (ii) people and skills; and (iii) supporting local businesses.

(3) **Towns Fund: £2.4 billion** to 'unleash economic potential', including contributions to net zero targets with individual projects supported with up to **£25 million**.

(4) **Future High Streets Fund: £830 million** to renew and reshape town centres and support recovery post pandemic. This is complemented by a small loans fund for Business Improvement Districts and the implementation of a Parking Code of Practice to regulate the private parking industry.

(1)   Levelling-Up Fund

The Government's Levelling-Up Fund (LUF) is a capital programme designed to invest in infrastructure that improves everyday life across the UK. The £4.8 billion national fund will support town centre and highs street regeneration, local transport projects and cultural and heritage assets. In Greater Lincolnshire, £30 million was allocated to two projects in October 2021 (LUF 1).   A further £124 million was announced in January 2023 (LUF 2).

Lead Authority	Funding Awarded £	Project Summary
Lincolnshire County Council – LUF 1	20,000,000	The A16 Levelling-Up Fund improvement scheme provides six projects along the A16 corridor between Boston and Spalding as a key route for the agri-food industry, reducing congestion, addressing major connectivity issues, and opening up the area for further investment opportunities.

Lead Authority	Funding Awarded £	Project Summary
West Lindsey District Council – LUF 1	10,000,000	Gainsborough Town Centre will be regenerated with projects such as a new four screen cinema and retail space, transforming the town hall into an enterprise hub, improving historic shop fronts, and creating quality residential flats.
Boston Borough Council – LUF 2	14,846,596	Boston's Rosegarth Square Masterplan will create a new urban park, including new green spaces, improved pedestrian routes and artwork in the heart of Boston to boost resident's health and wellbeing.
City of Lincoln Council – LUF 2	20,000,000	£20 million to build two bridges in Lincoln to run across railway, as part of the development of the Western Growth Corridor.
East Lindsey District Council – LUF 2	8,091,774	In East Lindsey, £8 million will save three of the Lincolnshire Wolds's most at-risk heritage and cultural sites. This includes Alford Manor House, a Grade II listed building, which will be brought back to life as part of a community visitor complex and Alford's only remaining windmill.
South Holland District Council – LUF 2	20,000,000	£20 million will build a new swimming pool, a floodlit football pitch and multi-use games area to revamp the Spalding site to inspire people to be active and healthy. There will be community space dedicated for use to provide a health and wellbeing hub, as well as an extra care housing scheme for older residents.
TOTAL	92,938,370	

(2)   UK Shared Prosperity Fund

The UK Shared Prosperity Fund (UKSPF) of £2.6 billion is a successor to the previous EU structural funds. Invested at a local level across three priorities: communities and place, support for local businesses and people and skills. The primary goal of the UKSPF is to build place and increase life changes across the UK. The fund is a mixture of revenue and capital funds. Grant determinations were made in December 2022, confirming over £33 million in Lincolnshire.

The Rural England Prosperity Fund is a top-up to the UKSPF and succeeds EU funding from LEADER and the Growth Programme. It funds capital projects for small businesses and community infrastructure. This will help to improve productivity and strengthen the rural economy and rural communities. Over £6 million has been allocated across our region.

Lead Authority	Funding Awarded £	Hyperlink to Project Activity
Boston Borough Council	2,194,351	www.boston.gov.uk/UKSPF
	429,355 REPF	
City of Lincoln Council	2,810,773 REPF	www.lincoln.gov.uk/ukspf
East Lindsey District Council	4,438,286	www.e-lindsey.gov.uk/UKSPF
	1,791,546 REPF	
North Kesteven District Council	3,195,139	www.n-kesteven.gov.uk/ukspf/
	747,556 REPF	
South Holland District Council	2,693,049	www.sholland.gov.uk/UKSPF
	699,884 REPF	
South Kesteven District Council	3,898,582	http://www.southkesteven.gov.uk/UKSPF
	540,469 REPF	
West Lindsey District Council	2,700,436	www.west-lindsey.gov.uk/growth-regeneration/uk-shared-prosperity-fund
	795,821 REPF	

(3) Towns Fund

On 6 September 2019 the Government invited 100 places to develop proposals for a Town Deal, as part of the £3.6 billion Towns Fund. The Towns Fund is delivered using Town Deal Boards, with investment priorities and project proposals set out in a locally owned Town Investment Plan. There are six places benefiting from over £134 million in Greater Lincolnshire: Boston, Lincoln, Skegness, Mablethorpe, Grimsby and Scunthorpe.

Lead Authority	Funding Awarded £	Project Summary
Boston Borough Council	21,900,000	The investment plan delivers twelve projects, which include Boston Town Centre Regeneration, Boston Train Station improvements, The Centre for Food and Fresh Produce Logistics, and The Mayflower. Details at www.bostontowndeal.co.uk/
City of Lincoln Council	21,900,000	13 projects across the city include restoration and repurpose of the Central Market, regeneration of the Sincil Bank area, and a Hospitality, Events, Arts and

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Lead Authority	Funding Awarded £	Project Summary
		Tourism Institute. Details at: https://www.lincoln.gov.uk/lincoln-town-deal-board-1
East Lindsey District Council	48,400,000	The Connected Coast brings together a vision for Mablethorpe and Skegness to maximise their potential. With a total of 13 projects, the programme will deliver a learning campus in Skegness, town centre transformation, for both towns, and a campus for future living in Mablethorpe. Details at https://connectedcoast.co.uk/

(4) Future High Street Funds

The Future High Street Funds (FHSF) is a national programme to support and fund plans in local areas to make high streets and town centres fit for the future. It will renew and reshape town centres and high streets in way that improves experience, drives growth, and ensures future sustainability.

Lead Authority	Funding Awarded £	Project Summary
South Kesteven District Council	5,600,000	An ambitious programme of regeneration in Grantham, which includes: station approach improvements, re-establishment of the Market Place, introducing residential or creative uses of vacant retail space.

Deep Dive into Lincolnshire Towns

During the course of the review, we have looked at various ways to select representative towns for deeper analysis and review selected by size, geography and location. The Office for National Statistics (ONS) describes a town as being 10,000 population and over. Below that nearly all settlements are defined as built up areas. The ONS states:

> "Built-up areas are characteristic of settlements including villages, towns, or cities. In 2011 across England and Wales 95 per cent of the usually resident population lived in built-up areas. The total land area of the built-up areas (BUAs) in 2011 was 1.4 million hectares (9.6 per cent of England and Wales). There are 5,493 built-up areas across England and Wales, with the smallest areas having a population of just over 100, and the largest, Greater London having a population of nearly 9.8 million."

The table below shows all settlements in Lincolnshire which might be deemed to operate as towns. It is based on analysis of local plan settlement descriptions, population scale and a local knowledge of the functioning of places. Each has been assigned a geographical sphere: Greater Lincoln (GL), South East Lincolnshire (SE), East Lincolnshire (E), South West Lincolnshire (SW) and an A631 Corridor.

Town	2011	2020	Change	% Change	Geographical Sphere
City					
1. Lincoln BUA	114,644	125,044	10,400	0.09	GL
Towns					
2. Grantham BUA	43,986	47,004	3,018	0.07	SW
3. Boston BUA	41,340	46,506	5,166	0.12	SE
4. Spalding BUA	31,702	36,737	5,035	0.16	SE
5. Skegness BUA	24,876	25,612	736	0.03	E
6. Gainsborough BUA	20,922	23,339	2,417	0.12	A631
7. Stamford BUA	20,628	21,734	1,106	0.05	SW
8. Sleaford BUA	17,412	18,741	1,329	0.08	SW
9. Louth BUA	16,466	17,637	1,171	0.07	E
10. Bourne BUA	13,948	17,040	3,092	0.22	SW
11. Market Deeping BUA	13,586	14,339	753	0.06	SW
12. Mablethorpe BUA	12,505	12,551	46	0.00	E
BUAs					
13. Holbeach BUA	7,900	8,395	495	0.06	SE
14. Horncastle BUA	6,807	7,219	412	0.06	E
15. Washingborough BUA	6,469	6,869	400	0.06	GL
16. Welton (West Lindsey) BUA	6,385	6,689	304	0.05	GL
17. Bracebridge Heath BUA	5,685	6,081	396	0.07	GL
18. Coningsby BUA	5,193	5,889	696	0.13	E

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Town	2011	2020	Change	% Change	Geographical Sphere
19. Kirton (Boston) BUA	4,815	5,492	677	0.14	E
20. Long Sutton (South Holland) BUA	5,147	5,343	196	0.04	SE
21. Market Rasen BUA	4,773	5,277	504	0.11	A631
Smaller 'towns'					
22. Crowland BUA	4,227	4,786	559	0.13	SE
23. Woodhall Spa BUA	4,314	4,382	68	0.02	E
24. Saxilby BUA	3,987	4,319	332	0.08	GL
25. Cherry Willingham BUA	3,963	4,291	328	0.08	GL
26. Sutton Bridge BUA	3,878	3,992	114	0.03	SE
27. Nettleham BUA	3,436	3,972	536	0.16	GL
28. Alford BUA	3,472	3,900	428	0.12	E
29. Spilsby BUA	3,452	3,746	294	0.09	E
30. Metheringham BUA	3,601	3,427	-174	-0.05	E
31. Skellingthorpe BUA	3,356	3,372	16	0.00	GL
32. Donnington	2,801	3,089	288	0.10	SE
33. Caistor BUA	2,489	2,812	323	0.13	A631
34. Billinghay BUA	2,054	2,194	140	0.07	SW
35. Bardney BUA	1,661	2,096	435	0.26	GL
36. Wragby	1,773	1,890	117	0.07	E
37. Wainfleet All Saints BUA	1,749	1,742	-7	0.00	E

Using the ONS 'definition' of a town, there would be:

- Eleven towns in Lincolnshire, plus the City of Lincoln.
- Nine Built Up Areas (BUA) with over 5,000 population and
- Sixteen smaller towns with a population of just under 2,000 to 5,000, which are also relatively important service centres in Lincolnshire due to their strategic positioning and the scale of non-domestic buildings.

We selected four towns for an in-depth study:

(1) Caistor – no 33 and recognised as a 'smaller town' to the north of the county as an example of a town already undergoing locally led review.
(2) Mablethorpe – no 12, a BUA chosen as an example of a coastal town/seasonal economy with Towns Fund investment.
(3) Louth – no 9 BUA selected as an historic market town and major service centre for the eastern part of the county.
(4) Holbeach – no 13 chosen as the largest of the BUAs and an important market town and service centre for the south of the county.

Strategic Infrastructure Delivery Framework 23

Strategic Infrastructure Delivery Framework (SIDF) 23 was commissioned by the Greater Lincolnshire Infrastructure Group, supported by all eleven local authorities in Greater Lincolnshire. It details the areas where strategic infrastructure investment, as a driver of growth, is most needed in Greater Lincolnshire and Rutland. The SIDF supports devolution. It supports:

- Transport (roads, rail, ports, aviation, rural public transport and active travel), digital, energy, water and waste infrastructure that is fit for growth;
- Housing stock that is affordable, healthy, sustainable, accessible and represents an environment attractive to housing investment (including in town centres);
- Business infrastructure that can create more high value jobs, innovate and increase productivity;
- **Prosperous, accessible high streets and market towns which showcase their unique identities and instil a sense of ownership and pride in our residents while attracting visitors to our area;** and
- A healthy population with access to appropriate services and resources that help them achieve wellbeing and a good quality of life.

This framework is intended as a launch pad that partners across Greater Lincolnshire can use to gather the powers, influence, and finances to make growth in the region happen, and to generate a significant contribution to local and UK growth by supporting our priority economic sectors. This will happen through prioritising projects that align to the SIDF, commissioning action plans that stimulates new activity or accelerates existing activity and strengthening business cases to encourage investment. The SIDF supports devolution by identifying 'what' actions are required to deliver growth through strategic infrastructure investment.

Levelling-up requires collaboration, local leadership, and vision to identify sustainable and inclusive growth. Infrastructure investment is a prerequisite to growth, and when coordinated it becomes a springboard to a strong, flourishing economy for residents and businesses.

The SIDF 23 links infrastructure, long-term strategic vision, and social investment to level up the region. It aims to make sure our left-behind neighbourhoods, rural and coastal areas, market towns and city are thriving, attractive communities that residents are proud of, and that provides them with improved wellbeing, opportunity, and quality of living. Infrastructure is vital to attracting visitors, workers, and investment and to achieving sustainable economic growth.

The SIDF 2023 builds upon Greater Lincolnshire Plan for Growth, the extensive Local Industrial Strategy evidence base, adopted Local Plans and Local Transport Plans.

To deliver support the 2050 Vision for Greater Lincolnshire, the SIDF centres around:

- **Place** - levelling up and inclusive growth to create quality places, sustainable communities, and beneficial physical environments.
- **People** - economic growth that helps our 1.1million residents to access well-paid employment, good quality housing and excellent health and well-being outcomes that in turn drive productivity.
- **Planet** - decarbonisation and other responses to climate change that support sustainable growth and help achieve Net Zero targets, while enabling innovation in low carbon technologies and renewable energy particularly in zero emission vehicles, mass transit and the decarbonisation of rail and maritime travel.

Towns such as Grantham, Skegness, Mablethorpe, Boston, Gainsborough, Spalding, and Lincoln have a combination of Levelling Up Fund, Towns Fund and Future High Streets Fund investment helping to deliver inclusive growth. **Collaboration to provide infrastructure that supports these programmes will help them deliver their full potential and achieve value for money.**

A series of ambitions in the SIDF support town centre vitality. These include:

- **Digital connectivity**, this is central to addressing a wide range of health, social, economic, and environmental issues and to creating a place where people want to live, work and visit. This is the core of the SIDF and aligns to Vision 2050. Digital will:
  - Improve local people's lives.
  - Support the growth of local businesses.
  - Bring new businesses to our area.
  - Drive innovation and Research & Development.
  - Attract new investment.
  - Protect our environment and support sustainability.

- **EV charging points -** these are becoming more available to residents but there is a need for more charging facilities across the region. Lincolnshire is leading on a Midlands-wide Local Electric Vehicle Infrastructure (LEVI) pilot in association with Midlands Connect which will deliver over £3 million of Government and private investment to provide on-street residential EV charging in largely rural areas. This will be a catalyst for higher EV ownership, innovation in delivery models and it will raise the profile of EV across Greater Lincolnshire

- **Accessibility (moving people) -** strategic infrastructure needs to encourage the provision of local facilities, improve virtual connectivity through digital connections, and provide improvements to walking and cycling routes. We need sustainable modes of transport to connect residents to their local communities so they can contribute to the local economy and access places to work and socialise, as well as key services like education and healthcare. This will be achieved through investment in improving and extending our existing network, and through the strategic planning of Sustainable Urban Extensions.

SIDP Case Studies

Visitor Economy & Defence Lincoln Be Smarter City, including Lincoln Connected

The Lincoln Town Deal Investment Plan is currently tackling the city's digital issues through two key projects – Lincoln Be Smarter (LMS) scheme and Lincoln Connected. These developments support Lincoln's growth as a smart city, making it a place with smart networks for residents, encouraging business growth and enabling innovation in key sectors.

Led by the University of Lincoln, the LMS scheme accelerates the adoption and development of industrial digital technologies through focused support to SMEs, helping them digitalise, grow and raise productivity.

Building on the cultural, heritage, retail and leisure offers in Lincoln, Lincoln Connected will reimagine Lincoln's High Street using digital technology to connect people with the city's assets. It will enhance visitor experiences, encourage local spend and promote a thriving city centre. Interventions will include open content management, smart signage, lighting infrastructure, and grants to support digital art installations.

Sleaford Town Centre Regeneration – 'The Heart of Sleaford'

Sleaford serves as a shopping, services and facilities hub for its residents and surrounding rural communities. The Heart of Sleaford is an ambitious town centre regeneration project which aims to create a new destination in the centre of Sleaford. Regeneration of Sleaford may address the decline in footfall in the town during and post Covid-19 and increase the numbers of visitors for retail, leisure and tourism purposes.

There is potential in the town to boost the local economy by:

- improving access, including pedestrian and active travel;
- improving the environment, including the marketplace, public realm, shopfronts, street schemes, and historic restoration;
- opening access to the town's green spaces for residents and visitors;
- supporting businesses to achieve their potential and drive local economic growth; and,
- focusing on people, skills and training to help maximise their income.

Previous regeneration plans for Sleaford, including a new cinema complex in the town, have been disrupted by Covid-19 which heavily impacted independent operators throughout the UK. North Kesteven District Council continues to work with the landowner of the proposed site to redevelop the town centre site, deliver pedestrian links, and carry out redevelopment of key identified sites. The Town Centre Masterplan is currently undergoing a refresh supported by the Government's Welcome Back Fund.

> **Digital Capacity and Skills**
>
> Leicestershire and Warwickshire County Councils and Loughborough University undertook a project to determine digital capacity and capability in high street businesses in order to model how to grow a digital high street economy. The key finding was that there were significant gaps between the skills sets of large and small businesses with the smaller lagging significantly and in some areas only 20% had an online presence.
>
> The project divided businesses into five digital categories and tracked changes over time. These were:
>
> - Disconnected
> - Digital informers
> - Social sophisticated
> - Digital enthusiasts
> - Trendsetters
>
> The concept to drive growth was to reduce the disconnected, develop maturity and upskill each profile and build capacity and increase the trendsetter category. Over the course of the project, the disconnected category is down 79% and trendsetters are up 110% (includes retail/service/leisure/convenience).

The SIDF will be published in May 2023 and will, through strategic infrastructure provision, support town centre vitality via physical and digital connectivity to and access to services in towns and enabling towns to support the service needs of residents as well as supporting the conditions for business growth and targeting key economic sectors – in particular the Visitor Economy ensuring that the movement of people to and around the county is maximised and sustainable and supporting the infrastructure investment needed to improve the visitor offer – including through digital connectivity, active travel and public transport.

Views of the Business Community

Federation of Small Businesses Lincolnshire

We considered evidence provided by the Federation of Small Businesses (FSB), a membership organisation for the small business community in the UK, with around 170,000 members, representing single-person businesses to organisations of up to 249 staff. FSB was the local point of contact for all 3,000 Lincolnshire members and acted as a lobbyist for the small business community across Lincolnshire. There are currently five and a half million small businesses across the UK. In the UK, in total 16.3 million people are employed in small businesses, representing 61% of total employment, with annual turnover of £2.3 trillion.

On 12 April 2022, the FSB published a report called *Local Leadership - How Local Authorities Can Support Small Businesses,* available at [Local leadership | FSB, The Federation of Small Businesses](#)). This report made a series of recommendations to county and district authorities across the UK. Some of the national recommendations that could be supported on a local level were identified for the Panel. We considered these recommendations and highlighted points of particular interest ; these included:

Engaging with Small Businesses

1. Ensure consultations are clear, simple and well communicated in good time. This means making them accessible online and making local businesses and business groups aware of upcoming consultations.

We acknowledged the importance of supporting this **particularly for businesses on the high street.**

2. Visit businesses. Face-to-face contact is important for building a trusting relationship with small businesses and local business groups, fostering good long-term communication. This also includes meeting with businesses who may not have an obvious presence on the high street or physical business premises.

Local representation was identified to be of paramount importance in engaging with small businesses on the high street. Councillor Tracey Carter served as an example of someone well-connected to the businesses in Holbeach and stated that visiting businesses; getting one's face known; and **showing representation from county council and district council level were important; and businesses valued this contact**.

3. Have a dedicated Councillor and Single Point of Contact acting as small business champions.

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FSB made a plea, calling through its local leadership approach for **a dedicated Councillor or a single point of contact within a council for small businesses, as small businesses often do not know who to contact.** They might contact their local Councillor, the Parish Council, the FSB, the Growth Hub, or even, they might just give up.

4.   *Use the new business knowledge and local relationships which your systems and staff have gathered over recent years, to build relationships, engagement and ideas for the future.*

We agreed that councils had learned a lot more about businesses throughout the pandemic and especially through being responsible for administering the Covid-19 Grant systems. **Ownership and activities development are of paramount importance.** The FSB would like **to see that continued in the longer term so that new knowledge and local relationships are maintained.**

Planning and Environment

5.   *Embrace the 'alfresco' and allow businesses to make the most of their outdoor space by utilising new planning powers, where appropriate.*

We supported the use of outside spaces and the simplification of the process allowing this. This would be possible either through the planning system or other decision making, and **aims at allowing businesses in leisure and hospitality to embrace the use of outdoor space, whilst also helping our high streets look busier, encouraging people's tendency to stay out more, spend more and create viable and sustainable connections with businesses that ultimately will maintain and potentially increase the level of footfall of small Market Towns and Villages as well as bigger cities**.

6.   *Where possible, development plans should ensure there is a range of affordable and flexible local business premises, both to encourage new enterprises and to allow existing businesses to grow.*

We were asked whether the County Council or District Councils could investigate, if it were possible for them to take over some of those vacant premises and turn them into flexible working spaces. **That would reduce vandalism and keep people on the high street. If there are working spaces, people will spend money at lunchtime in the shops and cafés.**

7.   *Local authorities should look to see how they might include commercial waste and recycling collection within existing services for the smallest of businesses.*

We heard that if commercial waste and recycling collections can be incorporated into general collections, small businesses might not need to pay as much for their own commercial waste. We supported in principle the facilitation of businesses in managing waste collections and **requested examples where other councils had employed successful initiatives where we could extract best practice from.**

8.   *Pay invoices within 30 days or sooner, and ensure that these terms are passed down the supply chain.*

Regulation

9.   *Adopt a "support first, enforcement second" approach across your regulatory services, with a focus on reducing the regulatory burden.*

We acknowledged that some small businesses did not necessarily have all the skills and all the knowledge to manage every single regulatory burden.

10.   *Introduce minimum standards for responding to businesses on licensing and inspections, such as food hygiene ratings, allowing businesses to open and operate safely as quickly as possible.*

We acknowledged the significance of applications for licences or inspection reports being processed quickly.

Business Support

11.   *Ensure that business support is accessible to all small businesses that need it, not just high growth, high potential firms.*

Councils should avoid charging for business support; Lincolnshire showcased a proactive stance in this area and District Councils were well linked with the FSB. **A cohesive approach that takes into consideration that people might live in one district and work in another is recommended.**

Business Rates

12.   *Keep business rate lists and data up to date, including properties which qualify for Small Business Rates Relief. Good data is critically important for both the collection of rates and should grants need to be paid out to those in receipt of rates relief. Knowing who the business owner is, and how to contact them can be critical.*

We heard that it was important to keep business rate lists and data up-to-date; this facilitated with processing grant applications and helping businesses. **We acknowledged that the Council also would know exactly who was running those businesses, which would aid relationships.**

13.   *Encourage eligible businesses to apply for Small Business Rate Relief and other available reliefs by proactively contacting eligible businesses to make them aware of how to apply.*

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Businesses should be encouraged to apply for rate relief where possible, and Councils could be more pro-active about encouraging those to come forward and claim. In addition, it was suggested that **any opportunities to offer business rate discounts or payment holidays or provide support to businesses to move into empty retail or leisure or hospitality premises, could be highly beneficial.**

14.   Provide appropriate signposting support for any business looking to appeal against their business rate valuation.

We were informed that **businesses were being deterred from appealing against a valuation and thus they may be paying more than they should be.** Where Councils had powers to support businesses to appeal their valuation, these should be exercised in support.

15.   Support businesses to access any available discretionary reliefs they may be entitled to, including discretionary relief funds provided by the government.

We acknowledged that Councils should help businesses gain access to any discretionary relief that is available.

Parking

16.   Upgrade parking meters and systems to enable multiple ways to pay. This could include contactless, pay-on-exit, or app-based parking charges.

It was suggested that to get people onto high streets, parking systems should be upgraded to support virtual/online/card transactions, to allow for users to pay with ease where they had no immediate access the correct amount of change. **We agreed that app-based charging or pay-by-card made it easier for service users to pay and improved chances of the allocated parking being used.**

17.   Trial schemes designed to encourage customers to shop in small businesses on their high streets by giving parking discounts to those who do.

Reference was made to schemes in Lincoln, where **parking costs were discounted to encourage shoppers to visit independent shops.**

Greener High Street

18.   Create a 'greener' high street by encouraging zero or low emission transport methods, providing EV charging points, and highlighting accessible pedestrianised routes and spaces.

Net Zero: **Electric Vehicle charging points,** though expensive to install, **could attract people to town centres.** Further **technological applications that showed live parking availability would increase ease of use and user satisfaction when visiting a town centre.**

Absent Commercial Landlords

19.   Tackle the problem of absent commercial landlords who allow empty properties to fall into disrepair.

We requested further information and clarification on the enforcement powers of local authorities on empty premises. **We acknowledged that where landlords keep properties empty for tax reasons, it could have a detrimental impact on the feel of the town, especially where there may have been rows of shops that were being deliberately empty. We were informed that the approach implemented was 'support first and enforcement second'.** Being a private landlord of retail premises might be someone's small business, therefore **a softer approach of encouragement to fill those spaces where possible, by meeting the landlord or having a forum where landlords could be encouraged to fill empty spaces and help them realise the impact it has on the town centre.**

Other aspects considered in relation to small business viability and support included:

- <u>Recovery from Covid-19:</u> high street businesses particularly were still recovering from Covid-19 – in effect 17 months of on-and off closure. They are faced with recruitment and labour challenges: since the pandemic recruiting quality staff who would work for appropriate wages that businesses could afford had become difficult; in addition, costs of employment are rising.

  Instability of footfall; lockdowns meant no high street footfall, and even when measured were lifted, it never came back to pre-pandemic levels. This is partially owed to changes to habits (such as working from home, ordering online). Many businesses on the high street had introduced online selling, which was an opportunity to re-approach their client base and also expand but was also costly.

- <u>Business Rate System and Business Rents:</u> The existing system was characterised as 'antiquated' and long overdue for review, which was happening, but slowly. The business rate system was challenging for small businesses, particularly on high streets. In addition, business rents were extremely volatile, with some larger businesses leaving town and city centre premises, simply because the rents had become unmanageable: 56% of business stated that rent levels had been an issue, with over half stating that if there had been rent regulation, it would have made things easier.

- <u>Energy Costs:</u> (as of April 2022) there was no support for businesses to manage increasing energy costs.

- <u>Shifting Payment Trends:</u> moving away from cash to debit and credit cards, with these trends accelerated by the pandemic: only 25% of payments in cash, but that 25% was crucial for the businesses.

- Investment: lockdowns and the increased expense of running a business, stunted growth plans for SMEs. Businesses were feeling cautious about investing either in new staff, new technology or new premises, simply because they were nervous about what their accounts were going to be looking like in the coming months.

- Impact of Loss of Large Retailers: loss of large-footprint businesses on the high street, such as Debenhams or Toys 'R' Us in Lincoln, could make high streets look 'sorry'. When large retailers pulled out, it could diminish confidence. This was probably more so in the City of Lincoln and some of the larger towns, like Spalding in Boston.

- Rural Small Businesses: these tended to feel more positively about their high streets than those in urban areas, but only 50% of businesses stated they were positive about their high street.

- Parking: FSB referred to free parking as something that would make the biggest difference to footfall: 70% of small businesses said free parking, or at least easy access to parking, would make the biggest realistic material difference to footfall and therefore to their income. Businesses would always want free parking, but it was not universally possible. Free short-term slots, for 30 minutes in town centres, could help regular spending in shops. People would be put off if they had to pay for an hour when they only needed ten minutes.

  As a Panel we concluded that timeless free parking as a general principle was not appropriate, because free spaces would be used by those working in a town, rather than by the shoppers. We emphasised on the peril of free parking negating the spaces available for shoppers. In contrast, half hour on-street free parking spaces was supported, but we stressed enforcement as key to successful implementation.

  Moreover, we also recorded our opposition in principle to pedestrianisation, as this would hinder footfall; there was a tendency for shoppers to prefer to park as close as possible to the shops.

- Access to Banks: 54% of businesses had referred to the closure of bank branches. This tended to impact the elderly and the vulnerable: if people cannot get access to cash, they cannot spend it in the businesses, who then find it difficult to bank the cash. It also impacted businesses also, who needed to bank their cash. The number of ATMs was also reducing. Some sort of banking presence would help but keeping existing bank branches was the preferred solution. 74% of those businesses had seen their bank branches close in recent years. Banking cash could add a journey to the workload and a cost. As Lincolnshire was large and rural sometimes the nearest bank could be forty minutes away.

- Lincolnshire Coast: The Lincolnshire coast had an extremely strong summer in 2021 after a very poor 2020, but this would be difficult to replicate and sustain in 2022. There was some excellent work going on with *Visit Lincoln*, which is going to become *Destination Lincolnshire*, to drive more tourism along the coast, but it is going to take effort replicate the success of 2021 in 2022.

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- Optimism: the latest small business index, which was just about to be published (in April 2022), indicated that business optimism had dipped by over 8%, compared to rising optimism in other sectors. This was because of all the reasons referred to above.

- Night-time Economy and Public Transport: limited public transport after 5 pm, may inhibit business activity and hinder night-time economic activity.

- Support for Businesses: where counties can offer support to businesses who wish to investigate making bids for funding, this was found to be encouraging and allowing businesses to take ownership over their town centres.

- Ad Hoc Market Days: pop up markets; and reducing bureaucracy for ad hoc market days, special events and festivals, as this would be valuable for driving footfall and attracting tourism. If a pop-up market is a success, retailers may then want to move into one of those retail premises permanently.

- Skills and Recruitment: retail businesses often had had issues in recruiting: they were getting fewer candidates for every role and because there were more vacancies; and it was taking longer, with more adverts and costs. Some of candidates were either very young, or not 'work ready'. This was because students had spent their last two years of school learning from home. Digital literacy was also an issue, as many cafés used a tablet ordering system. It took businesses far longer to train staff, which was a cost issue.

Lincolnshire Chamber of Commerce

The Panel received a presentation from the Lincolnshire Chamber of Commerce, which was actively present in local town centres, and was very much involved in *Shopwatch Schemes* in a number of Market Towns. More recently, we heard that the Lincolnshire Chamber of Commerce (CoC) had looked to other organisations, such as business improvement districts, to take the lead on high streets.

The points we discussed extensively included:

- The **individuality of town centres.** Reference was made thus to varying challenges experienced in each town centre and how these were influenced by factors such as the type of businesses that operated within these.

- **Using space differently** and looking at new technology to make sure that town centres were environmentally friendly and sustainability.

- **Communicating Strengths and Unique Selling Points**- where the county's town centres were location wise, affected their footfall; nevertheless, we acknowledged that it is important to identify their key strengths, features, benefits and their unique selling points and to be able to articulate those to both visitors and residents and to the town centres.

- **Complementing, Not Competing –** it was recommended that towns should complement, but not compete: if two town centres were close and shared similarities, instead of focusing on one, you could double the footfall over two towns, particularly if there was complementary offering: for example, antiques, history or culture. The Panel agreed that pride in local place was important, leading to enthusiasm and a passion for what it was and what it did.

  Nevertheless, we observed that potentially the boundaries of District Councils might not assist towards achieving this (where a town in one district complemented a town in another district). It was emphasised that **shoppers and visitors did not take account county or district boundaries.** It is therefore important to know who the customer is and make the best use of assets. Albeit that we were reminded that being able to collaborate was not always easy; an example of Deeping St James, a large village adjacent to a small Market Town was discussed.

- Awareness of who the **key players** in each town centre are, namely the organisations that generated activity, as working together could maximise impact. This would be along the lines of the approach of business improvement districts: bringing businesses together to get a single vision and to make sure that any funding was used together rather individually.

- **Data and information** - Business Improvement Districts (BIDs) are established under legislation and have a duration of five years. There would be consultation with the businesses in a designated district, to ascertain the challenges and develop a plan on what businesses themselves would want to invest in.

  If a business improvement district proposal were successful, there would be a levy on the businesses in the area based on their business rates. There would be a ballot in which over 50% of the businesses who voted needed to agree. If there was an agreement all businesses had to pay, with some exceptions owing to size. Business improvement districts could develop a clear vision for the area, as well measures of success and constituted a source of funding for activities.

  We enquired whether there was a minimum threshold for each BID in terms of the rateable value of the properties that would be included within the BID and were informed that if businesses met the minimum threshold, they would pay the levy: a business in receipt of small business rates relief would not necessarily be exempt from the business paying the levy.

The Panel also referred to the planned BID for Spalding and we queried whether there were enough big players.   In response the importance of stressing the value of a BID over its five-year term and developing a clarity of purpose was emphasised.

- **Market Towns and Markets** play a fundamental role of market towns in place making. Within those towns, open-air or pop-up markets enabled very small businesses to develop cheaply, but subsequently it might enable them to expand, for example into the local shops. In addition, markets in one place could be set up in another place. In some areas there were difficulties: such as who managed the stalls up and who owned the land.   However, markets could generate activity in an area that supported the uniqueness of a place. Events and culture also had a role in increasing footfall, but events needed to be of a significant scale to attract sufficient footfall.

  We discussed the definition of a 'market town' – whether it required town to have a market or whether the 'market' was in fact the permanent shops and businesses in the town, for example in Market Rasen. The same principles applied irrespective of whether there was a market or not: understanding the strengths and weaknesses; developing aims and objectives; and making the best use of the resources available.

- **Digitalisation**, including free public wi-fi and a *digital town crier*, which would have information on money-off savings. Social media was an important aspect highlighted. It was also important to promote a digital presence, for example in search engines and make sure websites were attractive, with clear information and good quality pictures.

- **Acceptance of change** was also a key factor that emerged in discussions. Lincolnshire businesses might not always be the first to embrace change. The best approach was to show the difference changes could make either to profits, or to savings on costs.

  Many small businesses might say they were too busy, and this represented a challenge for Lincolnshire, where 95% of businesses were small. Their focus tended to be on the day-to-day activity, with no time to step back and look at things differently. There were examples where advisors had visited businesses, identified what they needed, and provided a report with suggested solutions. A business then might say they did not have the time to implement the suggested solutions. The businesses almost needed to most hand-holding so that the solution was implemented, and the benefits of the solution were delivered.

  The Panel also acknowledged the challenges in very small businesses, with one or two people, who often had other commitments such as family, where there was limited time, where there could often be a resistance to change and concerns any changes would lead to higher costs.

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- **Involvement of Businesses in Representative Organisations.** There was a question on the level of business involvement in organisations such as the Chamber of Commerce and the Federation of Small Businesses (FSB), and particularly if there was lower participation in certain towns. In response Simon Beardsley stated that where businesses were responsive initiatives such as training or providing support, they tended to be aligned to the FSB or the Chamber, because they had decided to contribute towards those organisations. Highlighting the benefits of closer local collaboration was a potential solution, although it was sometimes difficult to get smaller businesses to connect.

  The Lincolnshire Chamber of Commerce had been established in 2000, following the amalgamation of the various town chambers. For a short period of time, the Lincolnshire Chamber had acted as an umbrella organisation and until a few years ago the Chamber had been centralised with less focus on individual towns. The Chamber appeared to be focusing on more activity, although there were strands where it was more sectoral-based.

  Businesses tended to look at their own areas, where the tangible results were immediately apparent. Government funding, such as the Towns Deals, was a good example of a focus on the needs of towns. That could be a catalyst for businesses to see something in another town and want to be a part of it. There was an opportunity to reinvigorate some of those local business networks.

  The Panel made reference to the involvement of businesses in Market Rasen in the Chamber of Commerce and the FSB. Sometimes even the timing of meetings could be an obstacle, for example breakfast or evening meetings. Involvement needed to be encouraged. Simon Beardsley stressed that leadership was important; and developing a vision together. There were leaders in Lincolnshire's towns, often under the radar but they needed to be excited and involved, to get them to understand what the opportunities were.

- **Political Involvement** was another element that we considered and were agreed that contact need not necessarily be via a Town, District or County Councillors, as a community-based individual, who was also well known in the community could also facilitate works.

- **New Roles for High Streets.** The Panel referred to the changing and evolving nature of high streets (losing customers to online shopping). During the pandemic the tendency was to shop locally. The current picture suggests that people were drifting back to the pre-pandemic ways. Much of this rested on 'pride in place' and 'passion in place' with the right range of shops. There was a balance: if there were, for example, too many charity shops or coffee shops, and less retail pull, there would be less rationale for people to visit.

- **Skills and Recruitment.** We acknowledged this was a contemporary challenge affecting a large number of businesses who were having problems recruiting and retaining staff. Skills were important and part of this was the progression within companies. Smaller businesses tended not to look to have the time to look to the long term for skills development: limited opportunity to invest in quality training, for example leading to a formal qualification.

  A lot of Lincolnshire's businesses were good at in-house training: getting people up to a certain level of competence, but they were not necessarily setting their sights on a wider aim: If businesses could attract people in from a wider area that would benefit the individuals and the organisation as well.

  It can be difficult to get smaller businesses to see the value and spend the time on upskilling. Larger businesses were seeing the opportunity to retain staff through upskilling and adding value to their employment, because they had time and potentially the funds to do so. There were fewer examples of that in smaller businesses.

The table below summarises **in a snapshot**, issues experienced by businesses as these have been reported to the CoC and proposed solutions as these were described by Simon Beardsley, Chief Executive Lincolnshire Chamber of Commerce, Director and Interim CEO Lincoln Business Improvement Group and Director of Lincolnshire Coastal Business Improvement District:

Consumer/User Points	Proposed Solutions	Businesses / Retailer Points	Proposed Solutions
Accessibility issues – lack of public transport, cost of parking	Upgraded parking systems – make different payment methods available. EV charging infrastructure – access to ensure sustainability	High rents and rates burden, appropriateness of building for use	Understand land/property ownership. Create a collective vision
Lack of offer including loss of anchor stores, too many charity shops and coffee shops	Expanded hospitality offer including alfresco. Improved pavement licence process Create a digital high street that complements customers' needs	Undercut by the internet	Bring people – increase footfall including animation/cultural offer and events. Support clicks and bricks through business support/digital skills/e commerce and enable retailers to increase their digital presence and support marketing including social media.

Consumer/User Points	Proposed Solutions	Businesses / Retailer Points	Proposed Solutions
	and business offers – free public Wi-Fi, smart benches, digital town crier – push offers and awareness, allow customers knowledge and access to local offers. Ensure bespoke responses – celebrating individual identity of high streets – there isn't a one size fits all – customers want 'individual offers'.		Work with other towns – complementarity Use markets where appropriate to draw people in
Inflation/price pressures	Making a compelling offer to increase footfall may mitigate reduced spend on a degree.	Reduced footfall	
Safety	Address any real or negative perceptions	Skills and employment base	Significant problems recruiting staff. Skills important as were progression opportunities. Many of Lincolnshire's businesses were good at in-house training – but needed to widen the recruitment net and look longer term at training staff. Options: ➢ Skills support programmes ➢ Develop entrepreneurs. ➢ Link with schools
N/A	N/A	No clear vision for the high street	Wider engagement with councils – single point of contact and clearly focused consultations

Consumer/User Points	Proposed Solutions	Businesses / Retailer Points	Proposed Solutions
			Complementarity not competition
			Partnerships – including recognizing who the key players are.
			Understanding the customer base – current and future
			Building on strengths and USPs
			Be data driven – use what data and information you have and identify gaps.
			Address negative perceptions (including crime and safety)
			Create an environment to attract investment.
			Consider the impact and lessons from Business Improvement Districts (BIDs).
			Align the assets that you have.
			Harness local community enthusiasm and associated pride of place – these can be the most powerful advocates for a town.

Views of our Future
Evidence from the Lincolnshire Youth Council

Lincolnshire's Youth Council provides a forum for young people to have their say on things that matter to them. It represents their views to the people who make decisions and to the wider community. In November 2022, the panel considered the opportunity of having the voice of youth captured in the review. Members wished to gather evidence pertinent to how young people viewed their towns, what they felt was missing and what they envisaged that their "near future" environment should look like to help them thrive and prosper.

The request was entrusted to our Lincolnshire County Council Quality and Standards Team and in particular to our Participation Officers who met with the Youth Council in 4-6 weekly intervals.

The evidence and contributions gathered by Participation Officers are summarised below, based on the area these were collated from.

Voices4Choices Boston and South Holland

Voices4Choices (V4C) from Boston and South Holland group stated that Holbeach was an "ok/good" place to live in; they added that the school was good and they also "liked the church"; one group, characterised Holbeach as "immense" which indicates that in the eyes of a young person, their locality, no matter what its actual size may be, appears greater and important.

Group participants provided some feedback on what areas they felt needed additional focus and support:

> - **Services and facilities that promote and support wellbeing; an,**
> - **Better electricity provision; young people explained that in their areas they experienced power cuts often.**

Group participants stated that they wished to see more infrastructure developments including:

- ✓ **Schools**
- ✓ **Shops**
- ✓ **Parks**
- ✓ **a youth centre**
- ✓ **sports facilities (football groups/teams support)**
- ✓ **a hospital**
- ✓ **a fire station**
- ✓ **a Police station**

Young people also added that their area lacked "things to do" in their existing parks and leisure spaces; some suggestions included a zipline, a swimming pool, and a cinema/theatre.

Voices4Choices Lincoln and West Lindsey

V4C from Lincoln and West Lindsey group had a discussion around **perceived safety**. One teen participant stated that they did not feel safe in Gainsborough and explained that the place had a "very different feel in the day and at night". They **did not "feel safe after dark"** and added that there were "some 'dodgy' people about". This young person concluded that **"greater Police presence"** would help increase the levels of felt safety in the area. What is important is that the same person added that although there were areas such as Marshall's Yard that they enjoyed visiting, the outlook of Gainsborough was not positive for them and they were in fact looking forward to begin leaving care as to be in position to leave the area and move to Lincoln where they were closer to family and felt that they had more "things to do" there.

Other participants added that they visited Market Rasen on occasion for shopping and to visit Tesco superstore. They added that they go with their carers and they required **transportation** to visit their friends, hence their knowledge and familiarity with the area was little as they were not able to roam and "spend long time" there. Interestingly, group participants noted that "Market Rasen has 2-hour free parking in the main car park" which corroborates their claim that they only spent little time in the area, enough to carry out their shopping/chores and brief visits to friends.

Lincolnshire Young Voices

This is a V4C Special Education Needs and Disabilities (SEND) group. When considering the topic, participants had a great focus on **accessibility** and **toilets provision** which were their key priorities. Participants stated that older shops were problematic in terms of entering and roaming around as they had steps. Pavements were also seen as an issue as some lacked **drop curbs at crossing points**.

Participants stated that cobbled areas such as Horncastle, although they were nice to look at, were proving difficult to navigate through. One young autistic person stated that they liked the market towns like Sleaford and Horncastle as they were interested in engaging in activities such as taking photos along the rivers and in the market areas. They noted bigger places like Lincoln and Grantham had much more to offer in terms of activities and variety of options for recreation.

This group also identified **transport** as a key factor. Distances and lack of transportation services made planning visits an important task. Another young person with autism added that they felt stressed and "got very anxious" if bus was not on time.

As mentioned earlier toilet access was a key factor for some of the participants, especially where an **accessible toilet** or a **changing bench** was required. They noted that very few

toilets provide the latter. Changing Places is an organisation that meets the highest requirements for accessible toilets. Currently there are few outside Lincoln with exceptions being Horncastle, Louth, Mablethorpe and Skegness as well as bigger towns Grantham and Boston. Lincolnshire Young Voices have a report for toilets in Lincoln as part of their priority.

In terms of visiting some places where there is lack of provisions required took a great deal of planning, to ensure "the visit would work". Louth for example despite being acknowledged as a beautiful place to visit, one carer stated it would be very difficult with the large wheelchair to manage some of the narrow streets and old shops when visiting. One young person said Mablethorpe and Skegness were quite good for accessibility with areas that allowed access to the beach for wheelchair users. Moreover, both Mablethorpe and Skegness have Changing Places toilets as aforementioned.

Young participants also added that they were conscious about **giving back to local communities** when visiting, such as spending a little in cafes and shops whilst being there. This was associated with accessibility and lack of appropriate facilities as mentioned elsewhere.

In line with the evidence collated by our Participations Team at these sessions, we felt that in overall young people hold a positive outlook of towns and villages in their proximities, with exceptions being noted in areas where the overall level of perceived safety is lower. Community safety both felt and perceived is of paramount importance for vibrant thriving communities.

Studies have shown that both neighbourhood violence and perceptions of neighbourhood safety are independently associated with mental health[1]. Moreover, according to data from ten sweeps of the British Crime Survey, public trust in the police is influenced more by expressive concerns about neighbourhood stability and breakdown than by instrumental concerns about crime[2]. Hence, trust may be motivated not by the apprehension of criminal activity but by common worries regarding disorder, unity, and informal social regulation.

It must be noted that research indicates that the way young children and young adults perceive safety, is strongly associated with the impact of fear instilled by older children in their environment that make them feel less safe[3]. Therefore, as it emerged in responses, it is rather fear of crime which may be attributed to negative experiences of the individual (child) associated with their exposure to bullying, threats or acts of violence taking place within their community environment[4]. In addition, young adults are more likely to feel protected in the presence of Police and to think that police is actively dealing with issues on a local/community level; this chimes with the evidence above[5].

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[1] Wilson-Genderson and Pruchno 2013
[2] Jackson et al 2009
[3] (McCormack et al 2010)
[4] McCormack et al 2010; Pople and Rees 2017; Batchelor, Armstrong and MacLellan 2019
[5] SCJS 2017/18

In terms of views around what would improve their wellbeing outcomes, it must be acknowledged that the question was posed loosely and in absence of a definition that explored domains (namely, positive emotion, engagement, relationships, accomplishment). Therefore, the observation around "facilities that promote and support wellbeing" should, in future, be explored within given frameworks to allow for a clearer view of what is associated with wellbeing and how the objectives of wellbeing are met through certain requested facilities. According to the Measuring What Matters programme (ONS 2011)1 that considered how individuals *felt* about their own lives and wellbeing, objective circumstances may improve without necessarily causing the improvement of the felt and perceived views of individuals. Hence, another important element and limitation of this report is the level of access that these young people have to the facilities, owed to their circumstances (need to be accompanied by carer, need for special assistance). In addition, certain themes relevant to infrastructure development (such as schools, parks, hospitals, fire stations and police stations) should be taken as perceptions of young persons who may be faced with obstacles when requiring certain services or where they must travel a long distance for them.

Parking restrictions appears to be impeding local shopping and limiting the extent of use of towns and villages by young persons, especially where they need to travel long distances and in the company of a carer. Beyond the responses of the Youth Council, we also considered the impact of transportation and parking availability in association to the night-time economy of towns and concluded it posed an additional limitation.

The SEND group's point of focus was around accessibility of towns and villages. What emerges from the responses is the apparent requirement for planning and careful consideration of options for transportation and visits, particularly - but not merely for SEND young persons. The availability of accessible spaces, toilets, reliable transportation, and options for recreational activities are prominent through the views captured.

- Perceived safety and crime levels is a concern emerging in our towns.
- Navigability is of paramount importance as is ensuring that our towns and villages remain accessible to all users.
- Limited public transport and restrictions in parking have a negative impact on the footfall of our towns and villages.

Traffic Regulation Orders

Traffic Regulation Orders[6]

As part of the evidence gathering process, the Panel requested information relevant to Traffic regulation orders (TROs) which can be used to restrict traffic to certain areas and can be tailored to restrict certain types of vehicles to certain times of day or days of the week.

TROs can also be used to manage parking by introducing limited waiting times to get a turnover of vehicles, and businesses are generally supportive of this. TROs can also be used to apply restrictions to an area which means that yellow lines do not have to be used, if an area is environmentally sensitive.

In Lincolnshire there is a small, dedicated team processing TROs, which prioritises issues affecting schools. TROs can also be prioritised to facilitate business. The Team Leader preferred a systematic approach, looking at a whole area in one go, rather than making piecemeal changed. In February 2022, a backlog of about 200 traffic regulation order requests was reported. A standard TRO will take probably about four months, if there are no objections; and will probably take up to eight months if objections are received.

Lincolnshire has been operating a dedicated TRO team since a restructuring in 2017. It is a specialist area, and it is very hard to recruit staff. Prior to this, TROs were absorbed into the workload of divisional officers, who tended to have other priorities.

Traffic Regulation Orders are made under the provisions of the Road Traffic Regulation Act 1984 and it is this legal status which is required to allow them to be enforced either by the County Council's Civil Parking enforcement team in the case of parking restrictions, or by the police with regard to moving offences.

These orders may be permanent, experimental or temporary and are used to regulate, restrict or prohibit the use of the public highway. They can be introduced for a number of reasons such as to improve highway safety, to facilitate the passage of traffic or prevent the use of a highway by unsuitable traffic. Examples of orders include parking restrictions such as yellow lines, parking bays restricted to a time period or a specific user, such as Blue Badge holders or parking permit holders, and loading restrictions. Examples of orders which restrict access or traffic movements include pedestrian zones, one-way streets and prohibited turns. Under other legislation, the highway authority is also able to introduce pedestrian crossing facilities, shared use footway/cycleways and bus stop clearways.

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[6] *The House of Commons Library Briefing Paper on Traffic Regulation Orders provides further background:* Traffic Regulation Orders (TROs) (parliament.uk)

The TRO Process

TROs are delivered via a process set out in the Local Authorities' Traffic Orders (Procedure) Regulations 1996, and we must comply with the statutory requirements for consultation and public advertisement of proposals.

On receipt of a request for an order the steps below are followed:

- Assessment and monitoring – to identify if a scheme is justified and potential measures which could be applied (up to three months).

- Scheme is designed and signage checked for compliance with regulations. Signs designs may be required from Design Services (two to four weeks).

- Consultation documents are prepared and sent to the local Member for the area for comment (two weeks).

- Documents are sent to statutory consultees which will include district/town/parish councils, emergency services, Road Haulage Association, Freight Transport Association, all bus companies using the route affected and other highway authorities affected. We may also consult with other stakeholders at this stage such as residents' groups, NFU and the Chamber of Commerce, depending on the nature of the proposal. If objections or comments are received at this stage, they may be resolved by the Planning and Regulation Committee to gain approval for the scheme in its current form, or the proposal can be amended prior to public advertisement (4-6 weeks or 3 months if reporting to committee).

- The Order is publicly advertised via site notices, in the local press and on the County Council website. Although we are not required to consult directly with residents or businesses, we do so out of courtesy where they are directly affected by a proposal (6-8 weeks).

- If no objections are received than we can advertise the making of the Order, have it sealed by Legal Services and arrange the works on site. This involves preparing a works order which is then submitted to our contractor for programming (2-6 months).

- If objections are received following public advertisement, then these will be reported to the Planning and Regulation Committee (three months).

It is a requirement that TROs are taken through these stages, any one of which can introduce delay. The time taken for a standard waiting restriction for junction protection where no objections are received might take between four and six months to deliver on site, but more complicated schemes and those which need to be reported to committee may take twelve months or more to complete.

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Enforcement

A number of Civil Enforcement Officers are managed by the council's Parking Services Team, and they enforce all restrictions across the county which relate to on street parking (see Lincolnshire Civil Parking Enforcement Procedures V2).

Contraventions of moving offences currently rely on enforcement by the police. These would include one-way systems, weight restrictions and vehicles accessing pedestrian zones. Police resource for this function can be limited. In the long term there is an aspiration by the government that local authorities will enforce these along with parking restrictions.

Resource

Additional higher-level staff would assist in reducing the backlog of requests and allow more focus on larger, more complex schemes. However, TRO work is a specialism, and it can be difficult to recruit experienced staff. The team consists of several younger members of staff who we are working to develop in this discipline.

There are approximately 220 live TRO schemes ongoing at various stages and 180 requests awaiting assessment at the time when the discussion took place (Nov 2022)[7].

A system by which requests for waiting restrictions can be scored and prioritised is being developed and it is anticipated that this may reduce the team's workload to some degree.

Traffic Management in Town Centres

Several of the county's towns have TROs in place to manage traffic within shopping areas with varying degrees of success. These orders generally control or prohibit access by vehicles and can, to some extent, be tailored to suit requirements via the inclusion of exemptions for vehicles involved in certain activities. Difficulties can arise however if a scheme attempts to meet the conflicting needs of an area rather than seeking compromise.

Annex 1 provides some examples of the signage used to convey those Orders which prohibit traffic in this way and thereby introduce a Pedestrian Zone. The TRO can restrict all or certain types of vehicles and specify days and times when the restriction applies. Any exemptions contained in the Order may apply either throughout the day or again, at certain times, and this can also be communicated via signage. These zones are generally accompanied by waiting restrictions and the yellow backed signs shown at Appendix A function as repeater plates for the zone and confirm the waiting restrictions in operation.

Annex 2 shows signage relating to Restricted Zones. These do not restrict access but are a means of controlling on-street parking without the need for yellow lines. Exemptions can be applied for certain activities in marked bays provided within the zone. Best suited to small areas with limited access, access by traffic will be deterred by the unavailability of parking.

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[7] These are available to view on the County Council website: https://www.lincolnshire.gov.uk/traffic-management/find-traffic-regulation-order

Fig.1.High Street, Lincoln

Fig.2. High Street, Lincoln

Fig.3. Waterside South, Lincoln

Fig.4. Bailgate, Lincoln

Fig.1: The High Street in Lincoln is subject to a prohibition of vehicles but permits access for loading/unloading before 10am and after 4pm. The digital panel is blank between those hours when the exemption does not apply.

Fig.2: The restriction at the southern end of High Street incorporating the level crossing is similar, with an additional variation to cater for those needing access to off-street carparks on this section. A permit system is in place to exempt these vehicles.

Fig.3: This shows the signage for a Restricted Zone on Waterside South off Melville St. Marked bays are provided for loading and Blue Badge holders.

These schemes work well but the restriction on access to Bailgate shown on the sign in **Fig.4.** is largely ineffective due to an exemption in the order for access to on-street marked parking spaces. Traffic uses the area freely as enforcing a restriction where it will be necessary to differentiate between vehicles wishing to park and those just passing through will be difficult.

Owing to the historic nature of the Bailgate area the restriction signs are fixed to bespoke hoops for which permission from the Department for Transport was required.

The development of an effective town centre traffic management scheme will rely on engagement with all stakeholders, businesses, and residents to identify the function of the spaces under consideration, access requirements, and potential concessions. Walking and cycling will be promoted where the opportunity arises. Signage will be minimised where possible to reduce its visual impact, but it should be recognised that there will be minimum requirements in this respect to allow enforcement. There may also be limitations on what can be achieved through TROs owing to the restrictions on the design of the traffic signs and road markings prescribed in the Traffic Signs Regulations and General Directions 2016.

Overall, effective town centre traffic management requires a comprehensive and coordinated approach, involving a range of measures and stakeholders. TROs can be a powerful tool in achieving this, but they must be carefully designed and implemented to ensure that they are effective, efficient and acceptable to all parties involved.

The Panel, considering the aforementioned, acknowledged the hardships experienced by the TRO Team as well as their efforts to process TROs as swiftly as possible. We heard that the team was short staffed due to limited recruitment options within this technical field and we agreed to consider formulating a recommendation through this report in support of them and their efforts, with a view to strengthen the Highways Team.

In order to support effective town centre traffic management using TROs, the following recommendations can be made:

- Conduct a traffic survey: Before implementing any TROs, it is important to conduct a comprehensive traffic survey. This will help to identify the volume and types of traffic in the town centre, as well as any existing problems or bottlenecks. The survey can also help to identify potential solutions, such as new road layouts, traffic calming measures or parking restrictions.

- Involve local stakeholders: Town centre traffic management affects a wide range of stakeholders, including businesses, residents, and visitors. It is important to involve these stakeholders in the decision-making process, to ensure that any TROs implemented are acceptable to all parties.

- Prioritise pedestrian safety: In town centres, pedestrian safety should be a top priority. Measures such as pedestrian crossings, pavement widening, and speed limits can be implemented to ensure that pedestrians can move around safely and comfortably.

- Implement parking controls: Parking controls can be an effective way to manage traffic in town centres. Measures such as time limits, parking charges, and resident permits can be used to discourage all-day parking and encourage turnover, which can benefit local businesses.

- Consider road closures: In some cases, road closures can be an effective way to manage traffic in town centres. This can be done on a temporary or permanent basis, and can help to create pedestrianised areas, reduce traffic congestion, and improve air quality.

- Use technology: Technology can be used to support town centre traffic management. For example, sensors can be used to monitor traffic flow, and variable message signs can be used to provide real-time information to drivers.

Role of Heritage
Lincolnshire Extensive Urban Survey

Lincolnshire Extensive Urban Survey

We reviewed the Council's Historic Places Team's work on the Extensive Urban Survey (EUS), which is part of a national programme funded by Historic England to better understand the character of the country's historic places. The Lincolnshire survey covers a total of 30 towns across Greater Lincolnshire in partnership with colleagues from North Lincolnshire Council and North East Lincolnshire Council.

The main aim of the project is to increase the understanding of the historical development of each town and to identify how the history of each place can be read in how the town looks today. The EUS has undertaken historic urban character assessments attributing values to evidential, historical, aesthetic and communal attributes. This has enabled an opportunity to look at the modern-day town at the hyper local level and used digital mapping to plot the changes in the towns over time. The survey will cover the towns of the historic county of Lincolnshire, so.

The towns were evaluated to assess their historic character and identify the nature and extent of surviving heritage assets whether as standing structures, below ground archaeological deposits or in the surviving historic town plan. The towns of Lincolnshire vary greatly in their origin. Some towns date to the Roman period (Caistor and Horncastle) while at the other extreme, there are towns which grew as a result of industrialisation (Scunthorpe) or the growth in the leisure sector (Skegness and Woodhall Spa). The towns are as diverse as the internationally acknowledged beauty represented by Stamford to the suburban growth of North Hykeham. The project website, with examples of project reports www.lincsabout.town

Moreover, in Lincolnshire there are a wide variety of towns, some like Stamford MergedFile (lincolnshire.gov.uk) have been dictated by its geology and proximity to limestone quarries resulting in a high number of well-preserved Georgian mellow limestone buildings prompting Sir Walter Scott to call it "the finest stone town in England". The facades are synonymous with the town as they are in Market Deeping and Spalding. Meanwhile in Boston Boston1.pub (lincolnshire.gov.uk) it is primarily brick build due to its location close to local clays which have given it's unique character along with the skills, trade and technology brought from Europe through the port of Boston during medieval times when the town grew rapidly.

The Historic England supported programme closed at the end of 2022. The results will be held as part of the Lincolnshire Historic Environment Record (HER) and the HERs of NLC and NELC both in a database and spatially in a Geographic Information System (computerised mapping). The principal outputs will be an Historic Character Assessment report for each town. Due to limited resources these will not be available in hard copy form but will be made available digitally through the project's bespoke website (www.lincsabout.town) and will be archived with the Archaeology Data Service (ADS).

The project outputs will be used to support and inform a variety of planning policies from national objectives as reflected in the NPPF to the local policies of respective local planning authorities. This improved evidence base will assist the local authorities of the historic county of Lincolnshire and their partners in planning for the care of the county's historic urban settlements, protecting historic character and promoting sympathetic regeneration at a time of intense development pressure.

The County Council's Historic Places Managements Team have set about characterising the environment of the towns of Lincolnshire, one town at a time. Great progress is being made and there is ally good cooperation from partners across the county.

Inevitably the pandemic has had an impact upon the delivery of aspects of the project. With resources such as the County Archives and Local Studies Libraries being inaccessible for large parts of the last year progress has been slowed. The pandemic has also hugely impacted the amount and type of community engagement that the team had been able to do.

We strongly felt that the survey reports should be used as a source document for authorities and be instrumentalised to showcase Lincolnshire towns in a number of fashions:

➢ **Promoting tourism:** The EUS can be used to promote the heritage and historic character of a town to visitors. By highlighting the unique features and history of a town, it can attract more tourists and enhance the local economy.

➢ **Supporting local planning:** The information gathered through the EUS can be used by local planners to inform decisions about conservation and development in the town. This can help to ensure that new developments are sympathetic to the historic character of the town, and that historic buildings and spaces are protected.

➢ **Enhancing community engagement:** The EUS can be used as a tool to engage local communities in discussions about the heritage of their town. By showcasing the unique features and history of the town, it can foster a sense of pride and ownership among residents and encourage them to get involved in local initiatives and projects.

➢ **Supporting funding applications:** The EUS can be used to support funding applications for heritage projects in the town. By providing a comprehensive overview of the historic environment, it can demonstrate the importance of the town's heritage and the need for investment to protect and enhance it.

➢ **Providing educational resources:** The information gathered through the EUS can be used to develop educational resources for schools and other groups. This can help to increase awareness and understanding of the town's heritage among younger generations and foster a sense of appreciation for the historic character of the town.

The benefits of this work demonstrate the distinctiveness of each town with supporting maps and digital maps for each of the 30 towns covered. Various benefits and interdisciplinary

opportunities were discussed, and the reports provide a data led approach to support future place shaping.

They also provide an opportunity to support two digitised high street pilots known as **'Hidden Histories – A Virtual High Street Tour'**.

'Hidden Histories – A Virtual High Street Tour'

Following on from the discussions of the Scrutiny Panel 2 pilot projects are being developed to support:

a)   Holbeach and
b)   Mablethorpe

These have been selected due to targeted funding opportunities, the availability of historical evidence and mapping from the EUS and the opportunities afforded by a pilot to demonstrate specific opportunities.

The aim is to create a virtual immersive environment (VIE) for both high streets with the objective of driving new footfall, encouraging new visitors, and re-engaging the 'place' with the local community.

The VIE will have interactive hotspots that will reveal some of the hidden histories of the hight streets architectural and social past. The VIE will be a digital creation of exterior spaces and building interiors and produces a self-led tour of a space or place and can be viewed online or via a mobile device.

Information hotspots or points of interest can be added via text, images, videos, and audio. Multiple copies of a space can be created with hot spot adapted to appeal to a particular audience, for example businesses and residents.

In Mablethorpe an underspend on the Coastal Communities Fund programme is being used to support digital reimaging of the High Street. This will lean to engaging schools and students in content creation and harnessing local history components in the KS1/2 national curriculum. Pupils will engage with family members to collect local stories and develop an understanding of 'place identity and its heritage'. These stories will support the story telling.
In Holbeach the focus will be around providing businesses with an opportunity to advertise events and offers and the potential to operate local discount schemes, whilst telling residents and visitors the hidden story of Holbeach it will also act as a mobile town notice board.

Case Study - County Durham Pound Project [8]

This project harnessed the collective sending power of 12 public sector organisations and looked to focus that spending locally.

Including social value in decisions to award contracts was central to the premise. It was accepted procedure to consider quality, price and timescales in a contract award, but this was expanded to a contractor's environmental policies, apprenticeship programmes and community outreach work.

This was accompanied by wealth building, working with residents, businesses, and partner organisations to create and retain wealth within communities. Examples of this were promoting locally owned and socially minded enterprises, establishing local supply chains, or managing assets to allow communities greater control of buildings and land in their area.
The aim is to maximise the value of every County Durham pound spent to ensure it benefits as many people and businesses as possible.

Focused on a high street/market town this could be a viable way to support high street sustainability – physical regeneration community engagement and local businesses receiving higher numbers and value of contracts.

> **Exploration of something similar to the Durham Pound in Lincolnshire would accord with evidence received by the panel and aligns with wider discussions and objectives.**

Visitor Economy

Market towns make a significant contribution to the visitor economy in the UK, both in terms of attracting tourists to the area and providing employment opportunities in the tourism sector.

Market towns attract a significant amount of tourism spending from visitors who come to explore the area. This includes spending on accommodation, food and drink, attractions, and shopping, which in turn helps to support local businesses and boost the local economy. This also links the tourism sector in market towns with a pool of talent that seeks employment opportunities (especially local residents), ranging from jobs in hotels and restaurants to positions in tourism-related businesses such as tour operators and attractions.

Market towns often have a rich heritage and unique character that makes them attractive to visitors. In Lincolnshire there is a wide breadth of heritage and many of the smaller market towns are indeed historic urban settlements that can serve as a pole of attraction for visitors both from outside the County (nationwide and foreign) as well as domestic visitors (individuals living in the County and traveling across to explore different places). The tourism

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[8] County Durham Pound project seeks to maximise local benefits from £1billion spend - Durham County Council

industry, in turn, can help to preserve this heritage by supporting the restoration and maintenance of historic buildings and landmarks.

Another important part of maintaining a vibrant visitor economy is the ability to run and host events and festivals. Market towns often host a variety of events and festivals throughout the year, from farmers' markets and craft fairs to music festivals and cultural celebrations. These events can attract visitors from outside the area and help to boost the local economy. In Lincolnshire some characteristic examples include the Beyond the Wood's Festival (Horncastle), the 1940's Festival (Woodhall Spa), the SO Festival (various locations), the Holbeach Music & Beer Festival, and the Forbidden Forest (Grantham).

It must also be acknowledged that the tourism can set strong foundations for increased investment value. The presence of a thriving tourism industry can help to attract investment in the local area of Market Towns, including funding for infrastructure improvements and the development of new tourism-related businesses.

In summary some of the key elements that contribute to creating a vibrant mix that attracts visitors to a market town, include:

➢ Historic character: Market towns that have preserved their historic character and architecture can be very attractive to visitors, creating a sense of charm and uniqueness that is difficult to find elsewhere.

➢ Range of independent shops: Market towns that have a diverse range of independent shops, boutiques, and artisanal businesses can be very appealing to visitors, as they offer a unique shopping experience that is different from the homogenised offerings of larger towns and cities.

➢ Markets and events: Markets and events can be a great draw for visitors, creating a lively and festive atmosphere that encourages people to linger and explore. Farmers markets, craft fairs, and food festivals can all be effective in attracting visitors.

➢ Cultural attractions: Market towns that have cultural attractions, such as museums, galleries, and performance venues, can be very attractive to visitors who are interested in learning about the history and culture of the area.

➢ Natural beauty: Market towns that are located in areas of natural beauty, such as the countryside or by the coast, can be very appealing to visitors who are looking for a peaceful and relaxing break.

➢ Food and drink: Market towns that have a thriving food and drink scene, with a range of pubs, cafes, and restaurants, can be very attractive to visitors who are looking for good quality, locally-sourced food and drink.

➢ Walkability and accessibility: Market towns that are easy to walk around and have good public transport links can be very appealing to visitors, as they offer a convenient and stress-free way to explore the town and the surrounding area.

Overall, a vibrant mix of historic character, independent shops, markets and events, cultural attractions, natural beauty, food and drink, and walkability and accessibility can all contribute to creating a market town that is attractive to visitors.

The main points highlighted to the Panel about our visitors were:

- It is crucial to know your visitor (families, young couples, local or international travellers, interested in heritage or recreational activities or sports);
- visitors (like locals) want cleanliness, a good range of shops including independents, and eateries;
- provide safe storage for cyclists;
- consider parking charges – pay on exit more popular than pay and display, and short periods of free parking encourage a churn of visitors; and
- try to establish a unique selling point to attract certain types of visitors; and
- consider new established types of vacationing- tourists contemporarily, favoured self-catered accommodation such as Airbnb, which meant that they were also more likely to use local hospitality venues.

Our Head of Infrastructure Investment informed us that in Lincolnshire in 2019, the visitor economy was worth £2.49 billion, but fell to £1.24 billion in 2020 and recovered to £2.03 billion in 2021, not quite pre-pandemic levels. In 2021, there were 22.7-million-day trippers to Lincolnshire, a reduction of 26% compared to pre-pandemic levels, but an increase of 58% on 2020.

Visit Lincolnshire (www.visitlincolnshire.com) recorded 40,200 visits in the thirty days prior to 8 June 2022, with a conversion rate of 16%. Visitlincolnshire.com had been extensively updated during lockdown to be both inspiring and informative and it continues to develop its product.

We welcomed that the Visit Lincolnshire portal had been established and suggested that it offer a centralised place for mapping Lincolnshire's cycling and walking products. Nevertheless, we acknowledged that many of the Lincolnshire's current walking and riding trails needed significant maintenance and better signage so visitors could make better use. Viking Way and Lindsey Trail were cited as tourism products that needed better maintenance.

County Council Officers meet with their District Council Tourism Colleagues on a monthly basis to exchange ideas, modes of best practice, local intelligence, costings and STEAM data. We requested that in future meetings local apps should be raised as a means of promoting local offer and catching up with the digital needs of our visitors.

Visit Lincolnshire did not yet have tracking technology for data purposes; at the time of the review this was still being investigated after having established further content.

Signs variations for Pedestrian Zones (Extract from Traffic Signs Manual: Chapter 3)

Figure 6-1 Diagram 618.3B (S8-2-1) Entry to, and waiting in, pedestrian zone restricted
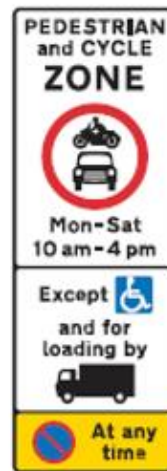
Figure 6-2 Diagram 618.3C (S8-2-2) Entry to, and waiting in, pedestrian and cycle zone restricted

Zone operates at all times

Zone operates for part of the day at the same times on every day of the week

Zone operates for part of the day at the same times on certain days of the week

Zone operates for 24 hours on certain days of the week

Figure 6-3 Examples of different times of operation for a pedestrian zone
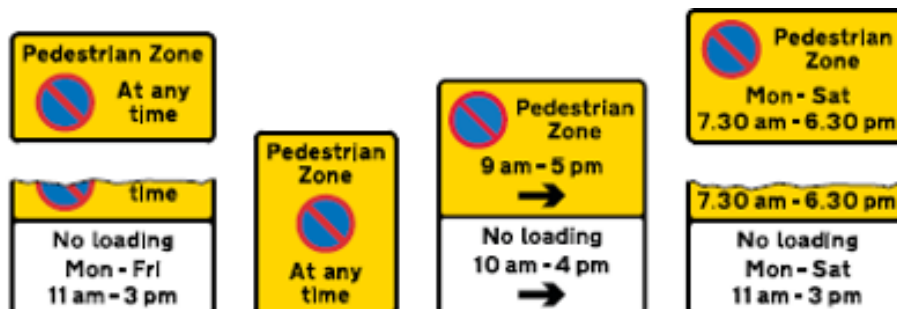
Figure 6-7 Examples of signs indicating a prohibition of waiting and loading in a pedestrian zone

Signs variations for Restricted Zones (Extract from Traffic Signs Manual: Chapter 3)
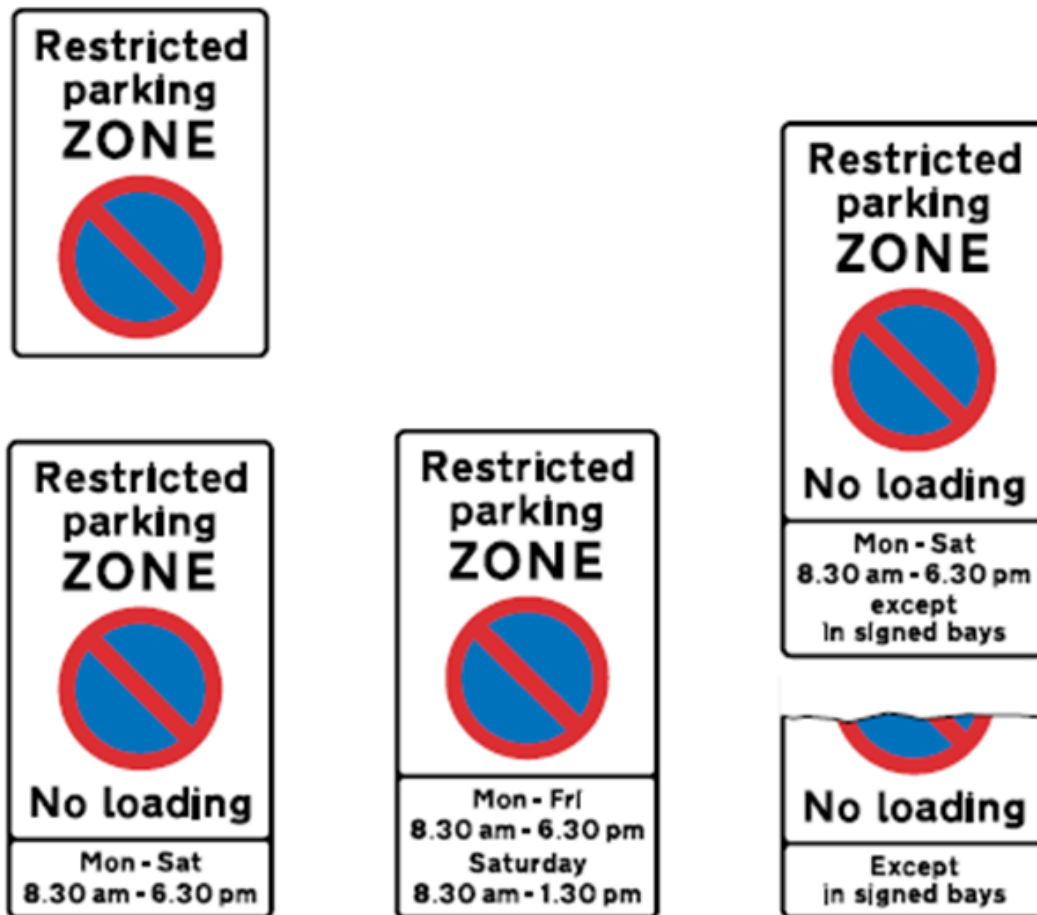
Figure 15-1 Examples of signs indicating the entrance to a restricted parking zone

Figure 15-2 Examples of signs indicating a prohibition of waiting and loading in a restricted parking zone

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Open Report on behalf of Andy Gutherson Executive Director - Place	

Report to:	**Environment and Economy Scrutiny Committee**
Date:	**12 September 2023**
Subject:	**Energy Option Analysis for Greater Lincolnshire Final Report, Outcomes, and Next Steps**

Summary:

In April 2023, an Energy for Growth – Energy Option Analysis for Greater Lincolnshire report was presented to the committee, which contained the Interim Report by consultants, RLB. This paper summarises the final report and the outcomes and outlines next steps and actions.

Actions Required:

Members of the Committee are invited to note the content of the final report and provide feedback on the next steps identified.

1. Background

As reported in April, Rider Levett Bucknall (RLB) was commissioned by the Greater Lincolnshire Infrastructure Group (IG) to undertake an Energy Option Analysis (EOA) for Greater Lincolnshire. The commission commenced in June 2022 and the final report was presented to the IG in July 2023.

The report is included in Appendix 1 and addresses the four Key Lines of Enquiry (KLOEs) included in the previous paper. The recommendations that are suggested in the report, are set out in Appendix 2, and the next steps that will be undertaken discussed in section 1.4 below.

1.1 Interim Report – Committee comments

The Interim Report was presented in April 2023, generating feedback from the Committee regarding additional areas for consideration. The table below indicates where these items have been addressed in the final report.

Committee comment	Where addressed in report
West Burton nuclear fusion Spherical Tokamak for Energy Production (STEP) prototype facility	There is a section on Nuclear in the Alternative Technologies section. STEP prototype is referenced on page 30.
Off-shore wind energy generation (as there are large facilities off the Lincolnshire coast)	There is a section on Offshore Wind in the Alternative Technologies section (Page 32 -33). Offshore wind farms in Greater Lincolnshire are listed on page 33.
Solar photovoltaic (PV) energy generation (as there are many Nationally Significant Infrastructure Project (NSIP) applications for this in the county)	There is a section on Solar PV in the Alternative Technologies section (Page 37 -38). Solar NSIPs in Greater Lincolnshire are listed on page 37.
Large emerging / future housing sites, particularly sustainable urban extensions (SUEs), and their significant scope for using green energy, e.g., solar PV, ground source	SUEs are referenced in section 6.1 – Residential. The case studies provide details of what the feasibility studies should include. In addition to this all SUEs have been included in the data analysis.
The impact of the increasing change to electric vehicles (EVs) rather than petrol / diesel vehicles	EVs are considered in the Section 6.5 and in other sections throughout the report. EV data is also included in the electrical load assessment data used to create the mapping dashboard
Specific comment on the lack of grid capacity affecting growth	Council area analysis of where capacity constraints will be are referenced in Section 7 – Future Demand Analysis.

1.2 Commission Outputs

The commission provided two main outputs: a final report and an electricity demand mapping dashboard system.

1.2.1 Final report

The final report comprises the research and engagement which RLB has undertaken during the commission period.

Key focus sectors (where growth is anticipated) and both Distribution Network Operators (DNOs) operating in the Greater Lincolnshire area (Northern Powergrid (NPg) and National Grid Electricity Distribution (NGED) have been engaged over the course of the commission to help understand the current electricity landscape and future strategies for the region.

The report provides insight on the following areas:
- UK national energy system

- Local energy context
- Energy management
- Alternative and emerging technologies
- Future Energy Scenarios analysis
- Energy investment analysis
- Sector discussion for residential, industrial, ports and logistics, health, agriculture, and energy
- Future demand analysis and energy shortfall analysis

The scope of this commission focuses on the distribution network, however it is recognised that the transmission network also faces a number of challenges , as identified in the recent Electricity Network Commissioner – Companion Report Findings and Recommendations report.[1] One of the next steps included in section 1.4, involves keeping up to date with best practice and changing policy. This will include, amongst other things, reviewing the Energy Security Secretary's action plan, that will be formulated as a result of the Electricity Network Commissioner's report, and understanding the recommended actions.

1.2.2 Electricity demand mapping dashboard system

The mapping dashboard, supported by Power BI, shows the future demand capacity of the distribution network primary substations when the electrical load associated with the proposed developments within the Greater Lincolnshire area are taken into consideration. The data has been defined according to priority levels that give an indication of timescales of the developments (1-3 years, 4-10 years, and 11 years+). Based on this data, a future demand analysis is included in Section 7 of the report, pages 61 to 73 and Appendix C (pages 106 -118) and includes RAG (Red, Amber, Green) maps of the primary substations demand headroom.

The mapping dashboard provides an evidence base for current and future electricity demand in the region and demonstrates where electricity distribution network capacity constraints are in relation to predicted growth. This helps to identify where investment may be required to meet net zero targets and enable economic growth.

Whilst the report also identifies that there are constraints connecting electricity generation schemes to the distribution network, it should be noted that only network demand and demand capacity constraints were included in the scope of this study. The mapping dashboard can be expanded to include additional layers, and this will be explored as part of the next steps.

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[1]

 Electricity Networks Commissioner – Companion Report Findings and Recommendations - Accelerating electricity transmission network deployment: Electricity Networks Commissioner's recommendations - GOV.UK (www.gov.uk)

1.3 Key findings

The report addresses the four Key Lines of Enquiry (KLOEs) in the commission specification, which are set out on page 3, and elsewhere, in the report, and provides a review and analysis of the UK electricity system. Key technologies and a range of other topics essential to regional net zero and the electricity system's role in regional economic growth are addressed and aligned as far as possible to specific data and evidence from the Greater Lincolnshire region.

RLB identified the following key findings which have informed the recommendations:

- A clear shift towards innovation and alternative energy sources across the region;
- Net zero is a common theme across all sectors, echoed by the shift in energy providers and increase in private investment;
- Inconsistent collaboration across the region.

1.4 Report Recommendations and next steps/actions

The report makes a number of recommendations and captures them under the following themes:

- Collaboration
- Energy Transformation
- Innovation

A table of recommendations included in the report, has been provided in Appendix 2. Officers have reviewed the recommendations and developed a plan of prioritised actions set out by theme, below. These are classified as either actively underway, emerging next steps (Year 0-2) or longer term (Year 2+) objectives which require further development and is focused on activity most appropriate for LCC to lead/facilitate. In addition to the report recommendations other actions have been incorporated that have arisen as part of the engagement process.

More widely, LCC's Place Directorate is driving other work which supports the energy agenda and whereby a coordinated approach will shape and further refine the actions outlined in this report.

Existing partnership working arrangements will further strengthen the activity, particularly through the Infrastructure Group (IG) which comprises the Chief Executives/Senior Management of the 10 Greater Lincolnshire Local Authorities (LAs), and the Strategic Infrastructure Delivery Framework (SIDF) Working Group which has comprehensive public sector representation.

1.4.1 Collaboration

Challenge: How to take forward collaboration

<u>**Actions actively underway**</u>

Creation of a Greater Lincolnshire Energy Working Group
- The SIDF Working Group will initially be used as the forum to engage LAs and wider partners with the recommendations of the Energy Options Analysis. The Working Group has been tasked by the IG with developing an Action Plan for Energy, and as such energy focused work will be effectively coordinated. This remit will be reviewed in light of the future role of the Greater Lincolnshire Local Enterprise Partnership (GLLEP) Energy Council and the emergence of the Regional Energy Forum.

DNO Engagement
- Continued engagement with both DNOs in Greater Lincolnshire to enable a two-way dialogue and develop a mechanism for collaboratively disseminating local knowledge to enable DNOs to accurately model for their Distribution Future Energy Scenarios (DFES).

Information sharing
- Continued intelligence, data and information sharing to strengthen knowledge and understanding, avoid duplication and benefit projects in the Greater Lincolnshire area.

Open Networks Insights Forum
- The quarterly online forum comprises electricity grid operators and stakeholders to align processes to network connections. Investigate scope of forum and recommend attendance of LAs accordingly to IG group.

<u>**Emerging Next Steps**</u>

DNO Engagement
- Continued engagement with both DNOs in Greater Lincolnshire to review strategies and understand differences in approaches across the region.

Integration with Regional System Planners (RSPs)
- Ofgem propose to create RSPs responsible for developing a multi-year strategic plan, bringing together those involved in planning the energy system at a local level and ensure they understand the goals and plans of each party. Monitor Ofgem progress on the implementation of RSPs and present an update/recommendation to the IG group.

Review of Working group Resources and Technical Skills across Greater Lincolnshire Authorities

- Resources and technical support will be reviewed to ensure a smooth transition from the SIDF Working Group to a more long-term governance arrangement.

Creation of an Interim Regional Future Energy Forum

- In addition to the energy working group, as an interim measure, it is thought that the SIDF working group could be used as a caretaker of the Regional Energy Forum as a mechanism to engage with LAs and wider partners. It is thought that this Forum will also have a role of talking to Government, to highlight what is happening in Greater Lincolnshire. Terms of Reference for this Forum are currently being formulated.

Longer term next steps

Creation of a Regional Future Energy Forum

- To capitalise on the opportunity of shaping the energy market in the region, a private and public future energy forum / committee, focused on demand vs supply could be developed. May be a 'strategic enhanced partnership' through Combined Authority arrangements or RSPs and is envisaged to complement the functions and remit of the Greater Lincolnshire (GL) Energy Working Group, above.

1.4.2 Energy Transformation

Challenge: Addressing capacity gaps in the electricity distribution network

Actions actively underway

Mapping Intelligence
The commission created a mapping system which produced a 'point in time' overview of known and planned developments to highlight areas with capacity constraint. Ongoing access to the mapping dashboard tool to provide real-time intelligence will require investment. Following an assessment, the most cost-effective option is for RLB to host and update the existing tool in the interim whilst opportunities to develop more robust and wider scope data and dynamic mapping tools are explored. The proposal will require each LA to financially contribute for continued access.

Emerging Next Steps

Mapping Intelligence
- Investigate increasing the function of the existing mapping dashboard system to include capacity of network to connect renewable generation schemes,
- Investigate other mapping tools for longer term implementation and evaluate cost/benefits of solutions for consideration by IG Group.

Learning from best practice

- Reviewing best practice case studies (e.g., smart energy system projects and Prospering from the Energy Revolution (UK Research and Innovation - UKRI) projects and learning from best practice, to explore if any of the case studies could be replicated in Greater Lincolnshire. This may be aligned to other work/commission.
- Keeping abreast of emerging policy and guidance in connection with the transmission and distribution networks and understand relevance to Greater Lincolnshire context.

Data analysis and review to establish place-based priority sites

- Review data and areas identified as having capacity constraints within GL. Assess which areas face greatest capacity constraints soonest and establish the focus of feasibility studies to be commissioned. Assess potential scope for inclusion within current workstreams/present to IG group.

Longer term next steps

Mapping Intelligence

- Implement the preferred energy planning mapping tool.

Energy focused public-private partnership (PPP)

- Sequential to the establishment of a Regional Energy Forum, produce an evidenced report identifying where / how intervention will be beneficial with recommendations on whether to establish an Energy PPP.

1.4.3 Innovation

Actions actively underway

Local Area Energy Plans (LAEPs)

- A series of LAEPs is recommended for GL to provide strategic planning and investment. Options for LCC supporting the execution of an energy strategy or LAEP are being explored as part of a current commission by the Place Directorate, which should provide insight and inform future decision making.

Emerging Next Steps

(None)

Longer term next steps

Smart Energy Skills programme

- Enhance existing skills in energy sector supporting the accelerated delivery of Smart Energy Systems. GLLEP / LCC to develop the concept and present to IG/relevant group.

2. Conclusion

Energy is a key enabler of growth. It is well known that the provision of electricity is critical to support both new and existing commercial and residential developments throughout Greater Lincolnshire. The lack of infrastructure and network capacity without costly network reinforcements can hinder and prevent development and investment in particular areas. This report has provided evidence of where the areas of electricity shortfall will be, and further research and engagement needs to be done to identify which of the innovative solutions covered in the report, would be most appropriate to address this.

The Energy Options Analysis commission by RLB has delivered a useful additional benefit of reviewing various activities across Greater Lincolnshire and provided constructive commentary on alignment. Furthermore, it complements related workstreams within the Place Directorate. Progress is already underway on several actions, with an emerging pathway to delivering the longer-term outcomes. An update of progress and outcomes of the next steps will be presented to this Committee on an annual basis as a part of SIDF reporting.

3. Consultation

N/A

4. Appendices

These are listed below and attached at the back of the report	
Appendix A	Energy Option Analysis for Greater Lincolnshire – Final Report V4. Prepared by RLB
Appendix B	Recommendation Table from the Energy Option Analysis for Greater Lincolnshire report

5. Background Papers

The following background papers as defined in the Local Government Act 1972 were relied upon in the writing of this report.

Document title	Where the document can be viewed
An Energy for Growth – Energy Option Analysis for Greater Lincolnshire	E&E Scrutiny Report 11 April 2023
Report for Information – Energy for Growth (utilities provision in Greater Lincolnshire) update	E&E Scrutiny Information Report 28 February 2023
Energy for Growth (utilities provision in Greater Lincolnshire)	E&E Scrutiny Report 25 October 2022

This report was written by Johanna Rhoades, who can be contacted on 07920 576720 or johanna.rhoades@lincolnshire.gov.uk

REPORT   **JUNE 2023**

ENERGY OPTIONS ANALYSIS FOR GREATER LINCOLNSHIRE

FINAL REPORT

RLB Rider Levett Bucknall

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VERSION

Version	Authorised	Date
V1	HE	14 March 2023
V2	HE	15 March 2023
V3	HE	30 May 2023
V4	HE	30 June 2023

AUTHORISATION

This report has been prepared by:

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1.0 EXECUTIVE SUMMARY

This report aims to support Greater Lincolnshire Local Authorities and the Greater Lincolnshire Infrastructure Group by providing a regional energy options analysis to identify where to target investment to meet net zero targets and enable economic growth, whilst addressing the below Key Lines of Enquiry (KLOE).

The KLOE are detailed below:
- To challenge whether the provision of energy genuinely affects viability of development and economic growth, differentiating between the levels of National Grid, Local Distribution Network Operator (DNO) and local energy operators – and whether implementing local innovative solutions could deliver necessary local requirements.
- To identify how authorities could work together to build the scale to make an alternative energy offer attractive to the private sector.
- To strengthen the connection between energy and other utility provision, notably digital infrastructure, and the Internet of Things (IoT).
- To provide a forum for the private and public sectors to collaborate on specific schemes, creating the environment for a strong dialogue that leads to investment in priority sites.

This paper outlines the KLOE alongside analysis of the demand from growth in the immediate term, and any further energy requirements to deal with the growth over the next 20 years.

To deliver the KLOE assessment, this report is enhanced by in-depth but highly accessible informational review and analysis of the UK energy system, key technologies and a range of other topics essential to regional net zero and the energy system's role in regional economic growth, all aligned as far as possible to specific data and evidence from the Lincolnshire region. This review covers pages 13 to 61 and includes topics like:

- The UK national energy system
- Local energy context
- Energy management topics
- Alternative and emerging technologies
- Future Energy Scenarios analysis
- Energy investment analysis
- Sector discussion for residential, industrial, ports and logistics, health, agriculture, and energy
- Future demand analysis and energy shortfall analysis

This study, managed by Lincolnshire County Council, on behalf of the Greater Lincolnshire Infrastructure Group, and completed by Rider Levett Bucknall (RLB), looks at current and proposed developments in the Greater Lincolnshire area to estimate future electricity demand, which will be key for delivering net zero. These demands have been mapped onto the electricity network to see where infrastructure investment could be targeted, including sub-stations and power lines which may have limited capacity in future. The local distribution network operators have been consulted on the

<div style="text-align:center">Page 156</div>

information and various options for providing additional capacity investigated and outlined in this report.

As noted above, we have analysed energy issues and demand for strategic sectors to determine future opportunities, constraints and innovations. Digital transformation and the green transition have been considered as key strategic elements to the future energy demand and supply across Greater Lincolnshire. Building on the region's unique position and attributes, the following actions have been recommended:

Table 1 Recommendations

Theme	Recommendation	Detail	Timeframe	Investment	Location
Collaboration	Open Networks Insights Forum	Quarterly online forum	Short term	Capacity of appropriate resource	Page 18
Energy transformation	Align strategic sectors energy strategies. Geothermal energy and biomass project collaboration and lesson learned sharing.	Integrate geothermal and biomass energy projects into GLLEP Energy forum or other appropriate forum.	Short term	Capacity of appropriate resource	Section 4
	Develop an outline strategy for integrating geothermal into the region's long-term energy landscape. Biomass strategies and investment should be closely linked to CCS, with a regional strategy considering socio-economic factors.	Strategies should be integrated into LAEPs with an overarching GL wide strategy.	Medium Term	Internal or external funding to facilitate strategy development	

Theme	Recommendation	Detail	Timeframe	Investment	Location
Energy transformation	Mapping of high intensity users in urban areas, linking together organisations such as the NHS trusts with local industrial businesses to power residential heating.	Heat network study to be undertaken. Applications to Heat Network Transformation Programme (HNTP) to be submitted.	Medium term (funding applications to be sent prior to closure of scheme in 2025)	Internal or external funding to undertake mapping exercise. Capacity of appropriate resource for funding applications.	Page 30
Collaboration	Alignment of DNO strategy across GL to ensure LAEPs are consistent	Energy management including ANM Identify targeted areas of improvement / upgrades to infrastructure to understand if potential case studies for energy mgmt.	Short term	Capacity of appropriate resource to engage with both DNOs	Page 41
Collaboration	Integrate aquaculture into agri-food sector energy analysis. Consider wider sector collaboration where there are known synergies e.g. logistics and transport, logistics and agri-food.	Due to the anticipated increase in transport related to agri-food and aquaculture, collaborate on transport strategies where there is anticipated increase in EV demand across combined sectors.	Medium term	Capacity of local resource Internal or external funding to work with GLLEP to integrate energy demand from both sectors	Page 88
Innovation	Undertake LAEP for all areas within GL	Determine appropriate areas (noting the DNO boundaries) for	Short term	Short term resource from each relevant area (district, county etc) to	Page 41

Theme	Recommendation	Detail	Timeframe	Investment	Location
		LAEPs to be undertaken. LAEP to identify short and medium term actions / projects, with prioritised investment. Scope should include electricity, heat, gas, future innovations inc. hydrogen, generation and storage as well as changing built environment demands.	Medium term	confirm boundaries. Funding to be sourced for each LAEP whether funded centrally or on a local basis.	
Innovation / Collaboration	Integration with Regional System Planners (RSPs) when / if put in place	GL local authorities engage with the new RSPs to determine accountability for regional energy systems planning.	Medium – Long term	Capacity of dedicated resource internally to engage with RSPs, Ofgem and DNOs. Potential for further investment if RSPs scope is determined to be closely integrated with local authorities.	Page 75
Innovation	Smart Energy Skills programme	Enhance existing skills in energy sector supporting the accelerated delivery of Smart Energy Systems, and attract resource into the sector through presenting the opportunity to help	Medium – long term	Pooled resource from GL, consider funding sources such as LCSF (Low Carbon Skills Fund) or other grants from organisations such as the DNOs	Page 80

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Theme	Recommendation	Detail	Timeframe	Investment	Location
		shape the future of energy in an innovative way.			
Energy transformation	Shortfall feasibility studies	Identify the most suitable solution to the primary substation demand headroom restrictions, a feasibility study should be carried out for each area identified as a priority 1 shortfall. This feasibility study would need to be carried out with the relevant Local Plan for that particular area and in conjunction with the net zero strategy.	Short term	Resource and funding to deliver feasibility studies	Section 7
Energy transformation	Energy PPP viability study	Study to determine if an Energy PPP would be viable for GL. A key area to explore would be Energy Performance Contracts	Medium – long term	Resource to fund study, subsequent investment if deemed viable.	Page 88

This study has clearly demonstrated that the need for an integrated regional strategy on energy and net zero involving key players like DNOs and all LAs to deal with the increasing complexity and emerging options for linking regional net zero with future economic growth.

For Greater Lincolnshire, the focus of a regional approach should be on energy capacity and generation innovation, promoting the regions unique characteristics such as the strong agri-food sector and strong links to energy, industry and CCS to drive forward investment and growth into ensuring the key economic sectors can secure sustainable growth.

1.1   KLOE REPORT REFERENCES

Due to the scale of the research completed within this study, the below table signposts and summarises the KLOE reference points.

Table 22

Key Lines of Enquiry	Section	Detail
To challenge whether the provision of energy genuinely affects viability of development and economic growth, differentiating between the levels of National Grid, Local Distribution Network Operator (DNO) and local energy operators – and whether implementing local innovative solutions could deliver necessary local requirements.	Section 4, 8, throughout report	Content throughout the report demonstrates the qualitative and quantitative research undertaken as part of this study. Inclusion of National Grid, DNO and other energy context has been provided to address this KLOE, with proposed potential solutions summarised in Section 9.
To identify how authorities could work together to build the scale to make an alternative energy offer attractive to the private sector.	Section 8, throughout report	Within the context of the local energy market, supply and demand alongside local strategic sectors, alternative energies have been researched with identification of case studies where progress or live projects are in motion. The KLOE section identifies the critical requirement to be collaborative between public and private sector – enhancing the DNOs strategy for improving energy infrastructure whilst being cognisant of the local demands. This study recommends that authorities have a critical role to play in facilitating collaboration to build scale.
To strengthen the connection between energy and other utility provision, notably digital infrastructure, and the Internet of Things (IoT).	Section 4.1, 8, throughout report	Digital infrastructure and IoT context has been provided in section 4.1, with recommendations and research overview included in Section 8. Anecdotal evidence provided during study demonstrates a weak relationship between utilities provision, with little indication of this being set to change. The key area where this is likely to differ is the gas network,

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Key Lines of Enquiry	Section	Detail
		which is likely to transform into a hydrogen network. This however is a long term development and therefore deemed of small impact in the short term. To ensure this KLOE was addressed in as much detail as possible, focus was given more to smart technologies, digital management and IoT.
To provide a forum for the private and public sectors to collaborate on specific schemes, creating the environment for a strong dialogue that leads to investment in priority sites.	Section 8, throughout report	During the research as part of this study, it was clear that multiple forums exist across GLA. To remove the potential that a forum creation would be a reinvention of an existing forum, we recommend that the existing larger forum is reconsidered in terms of representation and focus. DNOs are keen to engage, and we recommend that the forum takes the format of allowing that direct engagement in a controlled way, streamlining communications and providing a direct link between private organisations and DNOs to facilitate a clearer view of the constraints and demand.

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2.0 PROJECT SCOPE

The project scope was to deliver a fully coordinated, intelligence-led and targeted report into an Energy Options Analysis for Greater Lincolnshire that incorporates the outputs below and shows implications of current legislation.

The key project objective was to develop a report that will support the Greater Lincolnshire Local Authorities and the Greater Lincolnshire Infrastructure Group through providing an energy option analysis of the area, and to identify where investment may be required, to meet not only net zero targets but to enable economic growth.

RLB have addressed the KLOEs and the ability of the identified energy approach to meet the demand from growth in the immediate term, and any further energy requirements to deal with the growth over the next 20 years.

2.1 PROJECT OUTPUTS

A report detailing the key lines of enquiry below:

- Challenge whether the provision of energy genuinely affects viability of development and economic growth, differentiating between the levels of National Grid, Local Distribution Network Operators (DNO) and local energy operators – and whether a decision to implement local innovative solutions could deliver necessary local requirements.
- Identify how authorities could work together to build the scale to make an alternative energy offer attractive to the private sector.
- Insight into strengthening the connection between energy and other utility provision, notably digital infrastructure, and the internet of things.
- Investigate providing a forum for the private and public sectors to collaborate on specific schemes, creating the environment for a strong dialogue that leads to investment in priority sites.

Study outputs include:

- Engagement with key economic sectors to gain insight into how vital is energy supply to ensure investment and development.
- Exploration of opportunities within present/future energy networks including alternative and low carbon energy.
- Analysis of requirements for key employment sectors including future impact of growth e.g., food chain carbon reduction.
- Identification of two pilot Residential Development Scheme case studies.
- Energy supply and demand mapping across the region - National Grid: Energy Distribution and Northern PowerGrid.

2.2 STAKEHOLDERS

This report has been commissioned by Greater Lincolnshire authorities, with the main stakeholder for the Project being the Greater Lincolnshire Infrastructure Group (IG). Management and key decision making are led by the Infrastructure Reference Group (IG Reference Group).

2.3 APPROACH

This study has used projected growth plans from each local authority and developed a trajectory of energy usage to enable analysis of requirements for energy patterns. Within this study, area-wide transport plans, such as the Freeport on the Humber and other infrastructure requirements which would contribute to the overall energy demands have been considered.

Throughout this study it has been clear there is a shortfall in electricity capacity within the Greater Lincolnshire area, and this has been determined through anecdotal responses from developers across key economic sectors, and through mapping the energy demand across the region. RLB have engaged with the licenced distribution network operators (DNOs, National Grid ED & Northern Powergrid) with a view of aligning the need for additional capacity and generation. As part of this study, we considered how the private sector could assist the long-term objective of growing and investing in the local areas.

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3.0 ENERGY OPTIONS ANALYSIS

3.1 NATIONAL ENERGY CONTEXT

Energy is critical to maintaining a strong economy, from heating homes to powering the industrial sector. The energy landscape at present is volatile, driven through a range of global and local factors. As the UK is part of a global market, gas prices are set internationally. European gas prices soared by more than 200% in 2022[1] and coal prices increased by more than 100%. A significant factor in the rising energy prices has been Russia's invasion of Ukraine, which resulted in reduced supply to Europe in response to sanctions. This record rise in global energy prices has led to an increase in the cost of living in the UK.

It was expected that the UK Chancellor would announce a £20bn investment[2] in technology to reduce Britain's carbon emissions at the March 2023 budget. The investment was spread over the next two decades into Carbon Capture Storage (CCS) and low carbon energy projects. However, this was not reflected in the spring budget and anticipated investment will not appear before the next election in 2024, with additional uncertainty over funding from taxes or levies.[3]

The UK Government released several strategies in recent years to drive investment and improve energy security. These include the Ten-point plan for a green industrial revolution, the Net Zero Strategy, Powering Up Britain and the Energy Strategy, among others.

In the last quarter of 2022, energy production was stable overall with a range between different energy sources. 2022 saw a record low for both oil and coal generation, with natural gas recovering to pre-pandemic levels, nuclear energy production higher than 2021 despite plant closures, and all renewable technologies have increasing, including a 29% growth in wind, solar and hydro compared to 2021.[4] The growing proportion of UK electricity coming from renewables, reduces exposure to volatile fossil fuel markets, and strengthens energy security.
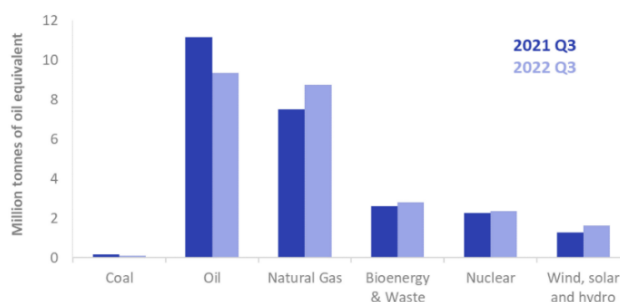
Figure 1 UK Energy Production, UK Government 2022

DECARBONISATION

The UK has set a legal target to reach net zero carbon emissions by 2050. As part of the green transition, by 2030 95% of British electricity could be low-carbon and by 2035[5] the electricity system

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[1] The Guardian, October 2022
[2] The Guardian, March 2023
[3] https://www.gov.uk/government/publications/spring-budget-2023/spring-budget-2023-html#growing-the-economy-1
[4] UK Government, Energy Trends December 2022
[5] UK Government, British Energy Security Strategy

should be decarbonised, subject to security of supply. This is a transition which reduces dependence on imported oil and gas, and delivers a long-term shift in energy supply, intended to provide cleaner, cheaper power, lower energy bills, and deliver thousands of high-wage, high-skilled new jobs.

Energy-intensive sectors like heavy industry, transport and domestic and commercial buildings must transition to being predominantly electric-powered in order to decarbonise. This will require major investments into new electricity generation (e.g., wind, solar and nuclear), new and upgrades to existing electricity grids, as well as energy efficiency programmes (e.g. domestic thermal insulation).

This transition will require new ways of managing the energy system beyond current mechanisms, particularly as the removal of large coal and gas plants changes the buffers of fuel available to the electricity grid and therefore its stability. The introduction of large amounts of renewable generation increases the variability of available electricity, and therefore creates a need for energy generation balancing and energy storage at a greater scale.

3.2   LOCAL CONTEXT

The Greater Lincolnshire area covers three tier-one local authority areas of Lincolnshire County Council, North Lincolnshire Council and North East Lincolnshire Council. The Lincolnshire County Council area comprises seven tier two districts each serviced by a district or borough council: City of Lincoln, North Kesteven, South Kesteven, South Holland, Boston Borough, East Lindsey and West Lindsey. The Greater Lincolnshire Local Enterprise Partnership (LEP) covers the Greater Lincolnshire area included in this study.

Greater Lincolnshire has seen significant population growth, with the 2021 Census data showing a 10% increase in some areas, with Lincoln's population rising to over 100,000.

Following the Covid-19 pandemic, Greater

District	Population	Growth since 2011
Boston Borough	70,500	9.1%
East Lindsey	142,300	4.3%
City of Lincoln	103,900	11.1%
North Kesteven	118,000	9.5%
South Holland	95,100	7.7%
South Kesteven	143,400	7.2%
West Lindsey	95,200	6.7%
North Lincolnshire	169,700	1.3%
North East Lincolnshire	156,900	-1.7%
Source: Census 2021		

Figure 2 Greater Lincolnshire Map, GLLEP Plan for Growth

Table 2 Population growth in Greater Lincolnshire since 2011, Census 2021

Lincolnshire has experienced significant economic impacts. The Greater Lincolnshire LEP (Local Enterprise Partnership) has released a strategy "Protecting, Progressing, Prospering: Greater

Lincolnshire Plan for Growth". The intent to grow the local economy will drive a different requirement for energy demand and supply requirements, particularly in the context of a rising population with a key goal to improve economic equality across the wider region.

Greater Lincolnshire (inc. Rutland) is a £23.2bn economy with significant opportunities for growth. Since 2010, the economy in Greater Lincolnshire has grown by £4.6bn. Average annual growth has been 3.1% in the decade up to 2019 (pre-pandemic).

However, productivity (as measured by economic output per hour worked) is 18.5% lower than the UK average, and the gap has generally been widening. This means that in 2020, the average job in Greater Lincolnshire had an output of £32.56 per hour, compared to the UK average of £39.94; a difference of £7.38 per hour worked. If the Greater Lincolnshire economy was performing at the national average in terms of productivity, output would be £5.2bn higher than current levels.

Manufacturing is the largest sector at £4.6bn GVA and is the third highest employer in the region. There are significant clusters across Greater Lincolnshire, including agrifood clusters in both the south and the north of Greater Lincolnshire, oil refineries and renewables cluster on the south bank of the Humber, and turbo machinery around Lincoln. Over the past 5 years, the number of jobs in manufacturing in England has fallen by 2% whilst in Greater Lincolnshire it has grown by 3%.

Greater Lincolnshire has significant potential, not only for local growth, but growth as part of the Midlands Engine Partnership (MEP). The MEP is the largest regional economy in the UK outside London.

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4.0 ELECTRICITY SYSTEM

This section of the report provides context for the electricity system at a national level, intended to provide context of its structure, processes and key organisations. Please note that throughout this study, electricity has been the main focus due to increasing electrification and decarbonisation of energy, heat and travel and the central role it plays in net zero ambitions.
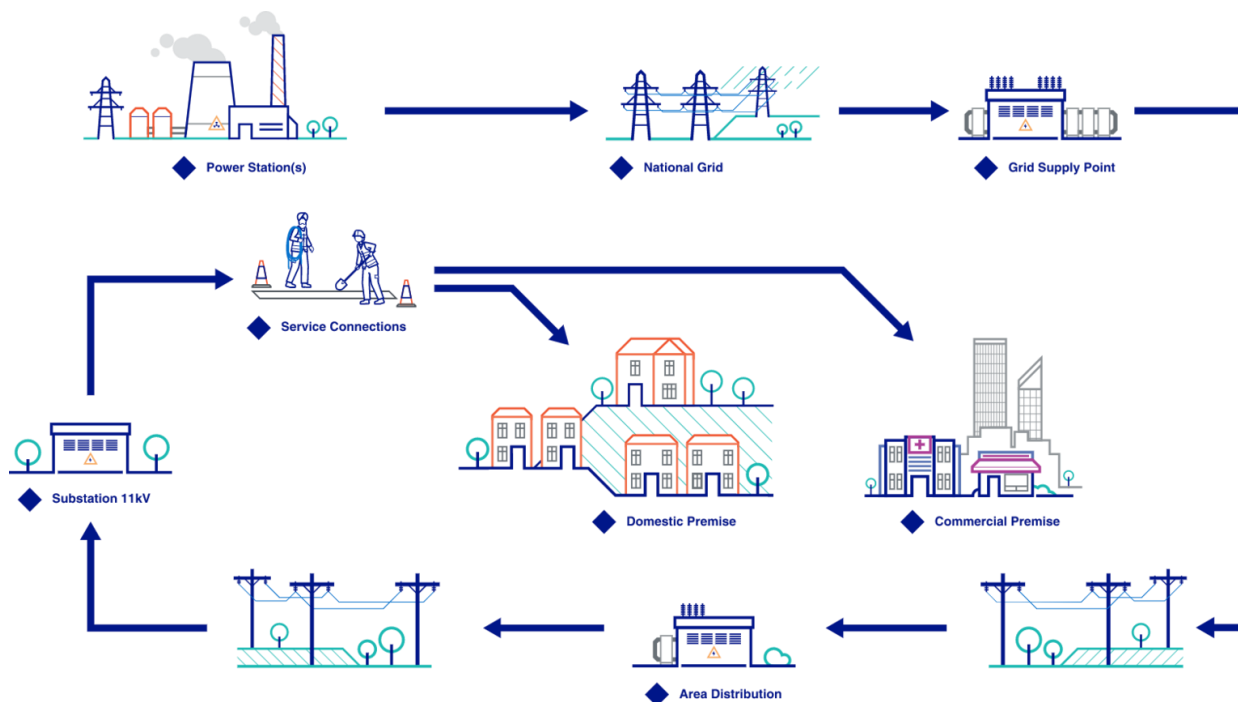
Figure 3 Energy provision structure, National Grid

NATIONAL GRID

The National Grid is the system operator of UK electricity and gas supply. It is the company that manages the network and transmission of electricity and gas to properties nationally. The National Grid network is made of high-voltage power lines, gas pipelines, interconnectors and storage facilities that together enable the transmission of electricity. The grid ensures that all areas of the UK have power supply. Within the network, there are many electricity distribution companies called Distribution Network Operators (DNO).

LOCAL DISTRIBUTION NETWORK OPERATOR

DNOs manage the electric power distribution system which delivers electricity to end users. There are 14 licensed DNOs owned by six different groups that cover specific geographically defined regions across the UK all regulated by Ofgem, and the two covering Greater Lincolnshire are Northern Powergrid and National Grid ED (previously Western Power Distribution). All DNOs are licensed companies that own and operate the network of towers, transformers, cables and meters that carry electricity from the national transmission system and distribute it throughout Britain. DNOs manage

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distribution networks from 240V to 400 kV through underground and overhead power lines, this covers commercial, industrial, and residential properties.

The Greater Lincolnshire Area is served by two separate DNOs, Northern Powergrid (NPg) and National Grid Electricity Distribution (NGED). NPg serves the northern part of the area, covering the whole of North Lincolnshire and North East Lincolnshire, while covering part of West and East Lindsey. In the south, NGED covers the whole of South Holland, Boston, City of Lincoln, South Kesteven, North Kesteven, with West and East Lindsey covered partially. Figure 4 below shows the dividing line between the two DNOs in within the Greater Lincolnshire Area.
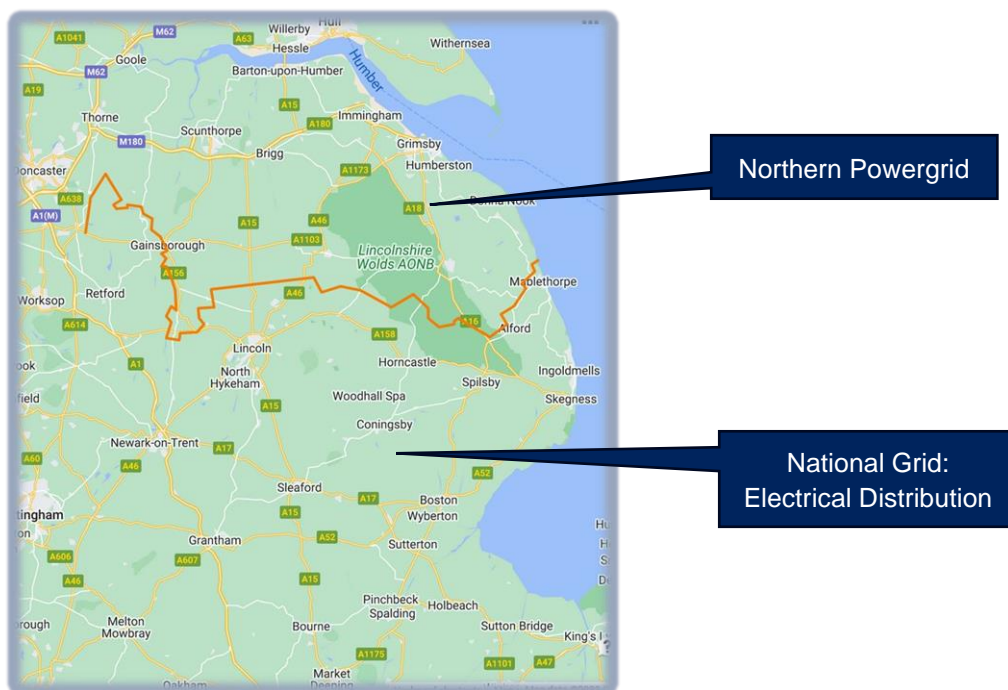
Figure 4 DNO boundary line within Greater Lincolnshire

Northern Powergrid (NPg) – Transports electricity across the North East, Yorkshire and northern Lincolnshire to provide electricity supply to 3.9million homes and businesses across the regions. NPg are part of Berkshire Hathaway Energy. NPg business plan for 2023-2028 states:

"Our plan positions us to take a leading role in enabling decarbonisation in our region and support future uptake in low carbon technologies such as electric vehicles and heat pumps. Our network will be instrumental in efficiently facilitating this transition, sitting at the heart of a decentralised, low carbon energy system that enables customers to be increasingly flexible with their energy use."

National Grid Electricity Distribution (NGED, previously Western Power Distribution) – Transports electricity across Midlands, South West and Wales. NGED business plan (RIIO-ED2) for 2023 – 2028 states that investment proposals are circa £6bn (increase of £1bn compared to present) with a goal towards net zero.
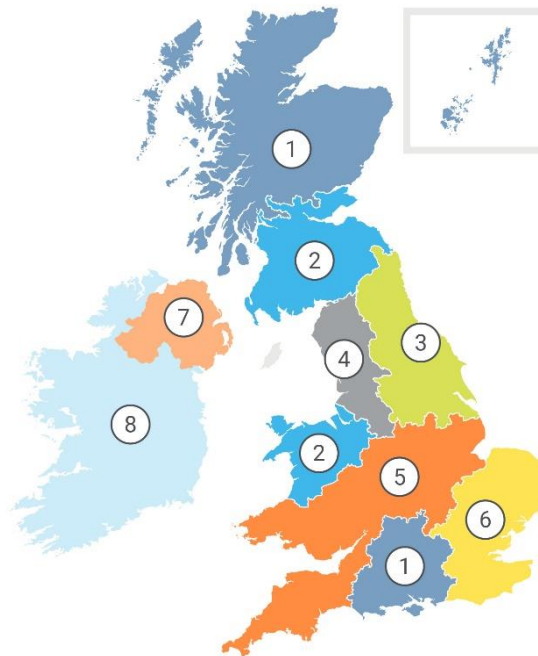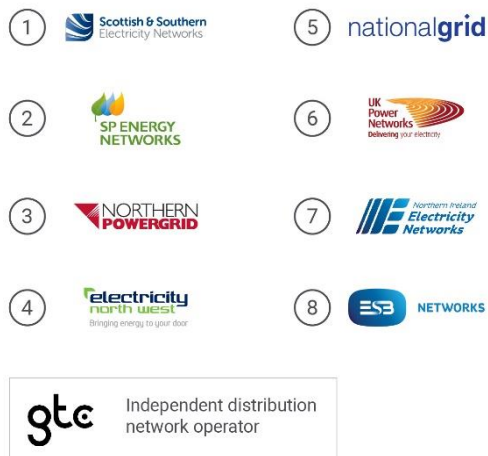
Figure 5 UK DNO regions, ENA

TRANSITION OF DNOS TO DISTRIBUTION SYSTEM OPERATORS (DSOS)

DNOs globally are challenged with of transitioning from being Network Operators to broadening the scope of their roles and expanding their operational reach to become DSOs. This has been driven by the transition to a lower carbon energy system and the increase in distributed generation. The current network was designed to have electricity flowing from large-centralised power stations to customers. Now, the system needs to evolve to include distributed sources of energy generation, for example large commercial and community owned renewable sources, as well as domestic scale generation.

This requires electricity to flow back and forth, which it was not designed for, and this is an engineering challenge. As part of their transition to DSOs, DNOs are responding to these challenges. New smart technologies will allow DSOs to have more visibility of what is happening on the network in real time, allowing the operation of the network to be optimised.

INDEPENDENT DISTRIBUTION NETWORK OPERATORS (IDNOS)

IDNOs provide an alternative route for businesses that want to connect to the electricity grid in the UK. Both distributors have many similarities, starting from the main concept - they own, run and maintain electrical infrastructure. The main difference is that IDNOs operate nationwide, without regional restrictions, to manage local networks. They are also regulated by Ofgem.

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DNOs distribute electricity from the transmission grid for a large geographical area, whereas IDNOs distribute electricity from either DNOs, or the transmission network, to smaller local areas. Both DNOs and IDNOs are responsible for connection line faults and maintenance.

IDNOs working in partnership with local authorities, can look at innovative solutions to solve the issues around integrating private networks, including batteries, renewables, and EV charging. An example of this is Vattenfall,[6] who partner with Housing Associations and local authority developers to provide a long-term energy supply partner with capital repayment for assets. IDNOs cover investment costs of site infrastructure, which they manage and operate including maintenance and fault repairs. Developers receive an Asset Adoption Value which releases capital, and developers then pay an annual operational fee for the supply contract.

SUBSTATIONS

A substation is a part of an electrical generation, transmission, and distribution system. Substations transform voltage from high to low, or the reverse. Substations contain equipment that help keep our electricity transmission and distribution systems running as smoothly as possible, without repeated failure or downtime. Specialist equipment within the substation site can help prevent local network failures and power cuts.

There are two main types of substation: transmission and distribution. Transmission substations are where the electricity enters the power grid and convert it to a level that can be transmitted. Increasing or decreasing the voltage as it is transmitted ensures it meets the local distribution networks safely, whilst minimising energy loss. Distribution substations then lower the voltage so it can be used in buildings safely.

National Grid owns more than 300 large substations, where 275kV and 400kV overhead power lines or underground cables are switched and where electricity is transformed for distribution to surrounding areas. Smaller substations are owned and maintained by local distribution networks such as NGED and NPg.

4.1   ENERGY MANAGEMENT

WHOLE ENERGY SYSTEM APPROACH

A whole energy system approach refers to the development of a range of options for clean energy including electricity, transport, and gas, and fitting them together in the best combinations to deliver value for business and consumers, as well as keeping the energy flowing.

Energy Networks Association (ENA) represents the owners and operators of licenses for the transmission and/or distribution of energy in the UK and Ireland, those who control and maintain the critical national energy infrastructure. This includes NPg and NGED. Energy Networks Innovation Process (ENIP) relates to network innovation, the end-to-end industry led process for reporting,

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[6] Low carbon housing - Vattenfall IDNO - Independent Distribution Network Operator

collaboration, and dissemination of Ofgem funded Network Innovation Allowance (NIA) projects in the UK, which NPg and NGED have engaged with.

ENA has an initiative called Open Networks,[7] which is looking to shape Local Area Energy Planning (LAEP) by co-ordinating input from gas and electricity networks into Ofgem, Department for Energy Security and Net Zero (formerly BEIS) and Energy Systems Catapult initiatives in the development of frameworks and tools. As part of this, a service is being developed which is aimed at providing Local Authorities with whole system solutions, where capacity constraints present barriers to new developments. For example, where a Local Authority has plans for a large number of new homes, there may be an electricity network capacity constraint if conventional solutions are deployed. A whole system solution could explore alternatives such as District Heating and Combined Heat and Power or freeing up capacity by moving existing electrical loads to alternative energy sources.

If the Greater Lincolnshire representatives are not already engaged with this initiative, then participating in the Open Networks Insights Forum is recommended, which would provide an avenue to determine the value it could bring to the region. This forum is an online event that is run quarterly. It would allow the Greater Lincolnshire representatives to engage with Open Networks as well as provide input and stay up to date on latest developments. This forms part of the works and remit of the recommendations detailed in the conclusion of this report.

Local Area Energy Plans

A Local Area Energy Planning (LAEP) is a data driven and whole energy system, evidence-based approach with the aim of identifying the most effective route for a local area to contribute towards meeting the national and local net zero target.

As a case study of local energy strategies being implemented, Greater Manchester Combined Authority is developing ten LAEPs across the city. The ten LAEPs will explore the unique local characteristics of each borough, including the types of buildings, transport systems, local industry, local energy generation, storage, and distribution assets, to help better understand how energy could be generated, distributed, and used in the future.

The insights will inform the creation of the Local Energy Market across Greater Manchester, helping to guide investment in measures like electric vehicle (EV) charging, energy storage capacity, decarbonisation of heating including introducing hydrogen where appropriate, home retrofit requirements for existing building stock and the development of local solar PV and hydropower generation.

Within the Greater Lincolnshire Area, the Greater Lincolnshire Local Enterprise Partnership (GLLEP), working with the University of Lincoln, has co-commissioned a LEAP for the UK Food Valley (UKFV). The project will undertake a "Deep Dive" into the energy requirements of the UK food valley and its transition to net-zero. Its overarching aim is to provide a series of recommendations for the short/near-term practical interventions that businesses in the agri-food sector could make to improve

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[7] Open Networks: developing the smart grid - Energy Networks Association

energy efficiency and transition to low/zero carbon forms of energy. In addition, it aims to provide an evidence base to inform the requirement for the longer-term infrastructure changes. The project commenced in August 2022 and will reach its conclusion in October 2023.

It is noted that both NGED and NPg have identified support within their business plans for local authorities to develop local area energy plans.

DEMAND MANAGEMENT

Demand for electricity can fluctuate due to weather, economic growth, line damage and other causes, with the potential to cause blackouts. The transition to renewable energy plays a role in these fluctuations too, because power demand may peak at a time when the unpredictable supply of renewable energy is low. The new energy scenario calls for an increasingly flexible energy grid.

Demand Side Management (DSM) is a strategy used by electricity utilities to control demand by encouraging consumers to modify volume and pattern of electricity consumption. A DSM approach includes monetary incentives to encourage consumers to buy energy-efficient equipment, or lower prices if they agree to reduce usage during peak times of demand. This results in reduction in peak demand when prices are highest which evens out the demand and in turn, evens the prices.

DSM can result in reduced electricity prices through removing the requirement for back-up generators that have to be utilised to cope with peak demand, reduces grid management costs, and creates a more dependable and efficient network.

NPg have now rolled out the option of limited grid connections in terms of the amount and timing of peak demands from prospective developments as a cost-effective means of facilitating major new development across its area. There are similar examples across the UK, including in London – a region that has areas of highly constrained energy supply and high demand. For example, rather than developments paying for an unregulated connection that would need to pay for infrastructure that caters for the 'worst case' scenario in terms of peak demands on the network, it would pay for a limited connection that would prohibit demands over a certain level from development during the network peaks, thus 'flattening' those peaks and limiting the amount (and cost) of infrastructure required to cater for them.

Demand management can be part of the solution to accommodating future demands on the network, flattening the curve of those areas within Greater Lincolnshire that are experiencing constraints in the near future, when network infrastructure investment may lag behind demand. This will require customer behavioural change, alongside digital and process investment from DNOs to progress this. Greater Lincolnshire authorities can play a role in driving this investment into areas that are undergoing the greatest constraints, and the areas that require the most inward investment via development and economic growth; i.e. utilising the flexible demand approach to defer network reinforcement whilst enabling development in the short term.

Speed of decarbonisation against level of societal change

The Planning Scenario was a scenario devised by us for DFES 2020 in response to our stakeholders' desire for rapid decarbonisation

PLANNING SCENARIO
— Highly accelerated electric heat and transport
— Highly decentralised and distributed renewable generation

HIGH

LEVEL OF SOCIAL CHANGE

CONSUMER TRANSFORMATION
— Electrified heating
— Consumers willing to change behaviour
— High energy efficiency
— Demand side flexibility

LEADING THE WAY
— Fastest (national) credible decarbonisation
— Significant lifestyle change
— Mixture of hydrogen and electrification for heating

SYSTEM TRANSFORMATION
— Hydrogen for heating
— Consumers less inclined to change behaviour
— Lower energy efficiency
— Supply side flexibility

Three of National Grid's Future Energy Scenarios. The fourth scenario, Steady Progression, does not meet net zero by 2050 and, therefore, is discounted

LOW

LOW ← SPEED OF DECARBONISATION → HIGH

Figure 6 Planning transformation pathways NPg

For future energy supply, solutions to increasing demand are not solely infrastructure based. Smart solutions integrating digital advancement with enhanced management driven by data will be part of the overall solution. These can be based on fixed limitations on a connection, or intelligent connections that make use of 'base loads' on the network or cheaper tariffs, such as charging EVs at night.

SMART ENERGY

Through the Smart Meter Based Internet of Things Applications Programme, the UK Government announced £200,000 in funding for five projects that aim to bring smart technology to energy

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monitoring and management.[8] The funding is to facilitate better energy usage control, and therefore manage the green energy transition, whilst noting rising energy bills. This plays into the UK government approach to energy management, considering scaling up demand flexibility services. Both NPg and NGED have invited customers to take part in their flexibility services. This would benefit the network through changing the customers use habits. Energy strategies nationally are moving towards intelligent energy consumption; increasing renewable generation whilst actively managing supply and demand to smooth peaks and troughs.

Through integrating digital links, this approach can drive down costs, enhance efficiency, and reduce carbon emissions. The approach creates data through the increased monitoring of its electrical, gas, heat, and transport systems. The data empowers consumers and businesses to deliver greater efficiency, unlock cost benefits, and enhance flexibility; as large energy sectors begin to rapidly decarbonise, the electrification of these systems becomes critical – for example, major parts of heating and transport demand, and the deployment of greater volumes of low carbon generation, are opportunities to deploy smart solutions at the same time as new technologies.

A Smart Energy System is an approach which utilises new and emerging digital technologies, artificial intelligence, and machine learning, to actively monitor and balance energy needs across connected energy networks by making real-time autonomous interventions. This can provide transparency on energy consumption to enable cost savings are achieved, as well as improving energy network resilience.

The key benefits that digitalisation in energy can provide include:

- Access to data to drive evidence-based decision making and ability to automate energy interventions where possible.
- Modernising existing energy systems and moves towards the green energy transition.
- Improved resilience of energy networks through artificial intelligence and machine learning.
- Smart devices and systems allow energy to be used when prices are lower.
- Management of energy usage to align with energy generation variation (wind and solar).

The switch from analogue to digital systems combined with high performance computing capability enables huge volumes of data to be processed; this ability creates opportunities for innovation by energy providers. This includes tariffs that are sensitive to market price variations, such as Agile Octopus.[9] Digital advancement within energy is not yet widespread, such as real-time disaggregated domestic and non-domestic renewable electricity generation.

Smart energy solutions include:

- **Smart grids**: coordinate the needs and capabilities of all generators, grid operators, end users, and electricity market stakeholders, to operate all parts of the system as efficiently as possible, minimising costs and environmental impacts while maximising system reliability, resilience,

[8] Smart_Grid_Vision_and_RoutemapFINAL.pdf (publishing.service.gov.uk)

[9] Agile Octopus | Octopus Energy

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flexibility and stability for transporting electricity from generators to homes, businesses and industry. A smart grid involves using the existing hardware of the national grid but in a smarter way. This means using data and communications technology to monitor and actively control generation and demand in near real-time. In practice, the smart grid can help network operators spot problems earlier and re-route power helping to ensure a more reliable and secure supply.[10] A smart grid cannot be considered as one single item, it is a combination of technology and innovation working together as one system. Examples of these include smart meters, Internet of Things, Vehicle to Grid and smart local energy systems. Both NPg and NGED consider the development of smart grids as part of their networks an essential aspect of preparing their networks to meet future demand.

Within the Greater Lincolnshire region, the use of smart grids can be a way for the two DNOs to manage the peak demand in areas, such as the north-east and city of Lincoln, where there is predicted to be significant constraint on demand headroom availability of the primary substations.

- **Smart meters**: Smart meters are a key enabler of the smart grid. The provide information to assist in improving network management as well as facilitating demand shifting and supporting distributed and renewable energy generation. The UK Government intends for all energy suppliers to offer a smart meter to every home in England, Wales and Scotland by mid-2025, covering over 26million homes.
    - o Enables live data updates to energy providers, for example during a power cut
    - o Enables improved network management
    - o Enables data driven investment decisions

- **Vehicle to grid**: technology that enables energy to be pushed back to the power grid from the battery of an electric car, effectively utilising EVs as batteries to manage local demand.
    - o Renewable energy production is inconsistent and volatile, resulting in a need to either utilise the energy when generated or find storage solutions.
    - o As EV usage increases as transport decarbonisations, EV batteries provide a new method to balance and store energy in a cost-effective way through utilising existing hardware.
    - o Estimated 140-240 million electric vehicles globally by 2030, therefore 140m vehicle batteries with an aggregated storage capacity of 7TWh.
    - o Northern PowerGrid have invested in Vehicle 2 Grid (V2G) studies in the last five years

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[10] Smart_Grid_Vision_and_RoutemapFINAL.pdf (publishing.service.gov.uk)
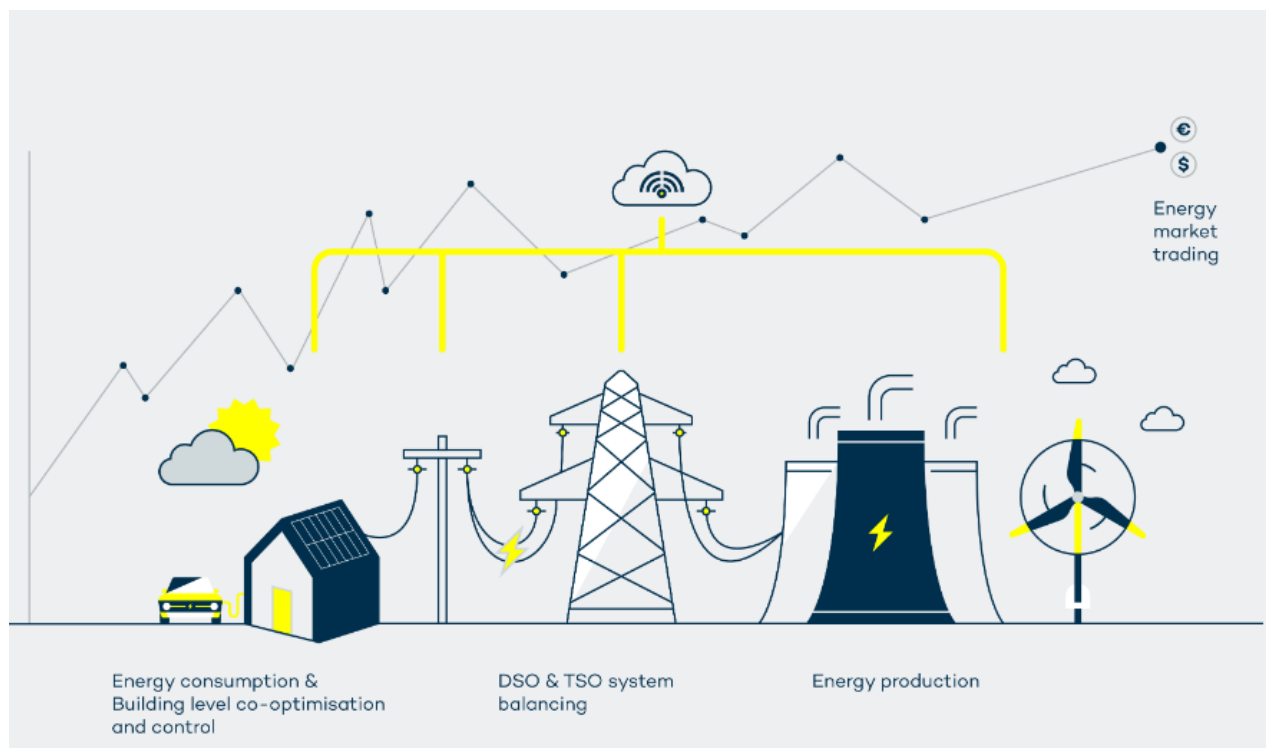
Figure 7 Virta, Vehicle to Grid process map[11]

- **Smart local energy systems:** A smart local energy system brings together energy generation, storage, demand and infrastructure and connects them in a smart way, at a local or regional level. This allows for a more tailored, dynamic approach to the energy transition, recognising that different places and communities have different needs and ambitions.[12]
  - A major innovation programme focused on smart local energy systems: Prospering from the Energy Revolution. This programme was delivered by Innovate UK and the Engineering and Physical Sciences Research Council (EPSRC) while being funded by Innovate UK. The aim was to work with businesses, communities and academics to explore intelligently joining up energy supply, storage and use at a local and regional level.
  - As part of the programme there were three demonstrator projects Project LEO (Local Energy Oxfordshire), Energy Superhub Oxford and ReFLEX Orkney.[13] Each of these projects showed that by using a combination of technology such as battery storage, electric vehicles, smart chargers and smart meters can build a local energy system that is flexible and meets the need of the local community. These systems can take away the technical and financial pain of energy transition by making the technology choices very simple for people.

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11 [Vehicle-to-Grid (V2G): Everything you need to know (virta.global)](#)

12 [Enabling smart local energy systems - Innovate UK KTN (ktn-uk.org)](#)

13 [UKRI-250122-SmartLocalEnergySystemsEnergyRevolutionTakesShape.pdf](#)

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Smart local energy systems can be adopted in Greater Lincolnshire in urban areas. The type of system will depend on the requirements and wants of the local community.

- **Internet of Things Electricity Management:** The Internet of Things (IoT) can be described as a network of physical objects, "things", that are embedded with sensors, software, and other technologies. The purpose of connecting these "things" over the internet with outer devices and systems to exchange data. These devices range from ordinary household objects to sophisticated industrial tools.
  - This connectivity means that electrical devices can be turned on and off remotely, charging an electric vehicle at night or a heating system in an office. On a national grid level, it means that these devices can contribute to demand response where they are switched on at times of least demand. This means that National Grid can better control peak demand which provides flexibility and additional resilience to the grid.
  - The IoT is part of the smart grid that is referenced above, it is one piece in a complex system. The UK Governments Smart Meter Based Internet of Things Applications Programme[14] there are five projects that are trialling how best to utilise the IoT within a smart grid system. National Grid have made reference the IoT in their Future Energy Scenarios document[15], however there is no strategy currently in place on how best to utilise the IoT and integrate it into the national grid. NPg consider the IoT one of the technologies that they will be deploying and using in the future once mass data collection becomes cheaper.[16]
- **Private Wire Networks:** Private wire networks are a form of distributed generation separate from the national grid. This involves a privately-owned electrical generation plant which is connected to a local electricity grid that supplies electricity to those connected to it. The benefits of using private wire electricity are that organisations can reduce their energy costs, improve their energy security and reliability, and contribute to a more sustainable energy future. Private wire electricity can be generated from a variety of renewable energy sources, including solar, wind, and biomass. Private wire networks can be small scale between a number of organisations or large scale involving an entire city.

An example of a large-scale private wire network is in Cowley, Oxford where, as part of Energy Superhub Oxford (ESO) project, the UK's first grid-scale battery storage system that is directly connected to the transmission-network has been set up. The government-backed project, integrates energy storage, electric vehicle (EV) charging, low carbon heating and smart energy management technologies to decarbonise Oxford by 2040.[17] The system uses a 8km private wire network to connect the battery system to public and commercial EV charging locations across the city. It is hoped that this project can become a blueprint to other towns and cities in the UK to follow to achieve net-zero.

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[14] Smart Meter Based Internet of Things Applications: Phase 1 projects - GOV.UK (www.gov.uk)

[15] download (nationalgrid.com)

[16] Innovation_strategy.pdf (northernpowergrid.com)

[17] Powersystems awarded EBoP works contract for the Energy Superhub Oxford - Powersystems (powersystemsuk.co.uk)

In the Greater Lincolnshire region, private wire networks are a way to manage connection to the grid and to achieve net-zero. Both small and large scale projects are feasible through the region. Small scale would be suited to rural setting where grid connection costs are large and in the north-east of the region where there may be significant constraint on the primary substations demand headroom. Setting up of a private wire network is not carried out through the DNOs.

4.2 ALTERNATIVE TECHNOLOGIES

Geothermal

Geothermal energy is the heat generated and stored in the ground and is a source of low-carbon, renewable energy. In the UK, it can be generated at depths from a few metres to several kilometres and can provide heat or power annually as it is not dependent on weather conditions. This means that it is able to deliver baseload energy for balancing more intermittent power generation from renewable sources, like solar or wind.

Geothermal technologies currently deliver less than 0.3%[18] of the UK's annual heat demand, using only a fraction of the estimated available geothermal heat resource. There is the potential to increase this proportion significantly and contribute to the UK's net zero targets. However, a lack of information about the application of the technology in the UK has meant that deep geothermal is not currently factored into the UK's carbon budget or government strategies. It is expected that widespread adoption of geothermal technologies will require long-term government support to develop demonstration projects and expand the industry.

Geothermal projects are occurring across Greater Lincolnshire, ranging from geothermal heat pump, drilling of boreholes in Lincolnshire, to Scunthorpe General becoming the first NHS Hospital in England to use renewable geothermal power for heating and hot water.

Without a clear route to market, hampered by unclear regulatory landscape, geothermal has the potential for economic growth across Greater Lincolnshire, but is unlikely to form a significant proportion of the regions energy strategy in the short or medium term. Added to this, there is often high upfront capital costs and geological risks of not being able to achieve required temperatures. It is recommended that engagement with the on-going projects across the region occurs to share lessons learnt and develop an outline strategy for integrating geothermal into the region's long-term energy landscape.

Biomass

Biomass is a renewable energy source, generated from burning wood, plants and other organic matter, such as manure or household waste. It releases carbon dioxide (CO_2) when burned but considerably less than fossil fuels. Biomass can be used to produce bioenergy in the form of electricity, heat, biogas or transport fuels, or to produce materials and chemicals. The Climate Change Committee recommend dedicated energy crops and forest residues as future sources of

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[18] https://post.parliament.uk/research-briefings/post-pb-0046/

domestic biomass. Bioenergy is currently the second largest source of renewable energy in the UK, generating 12.9%[19] of the total UK electricity supply in 2021. When combined with carbon capture and storage (BECCS), bioenergy may deliver negative emissions, which could contribute towards the UK's legal commitment to reach net zero carbon emissions by 2050. At present, approximately one third of UK biomass feedstocks are imported, predominantly wood pellets from North America, showing an existing demand in the UK market for biomass fuels.

Bioenergy with carbon capture and storage (BECCS) is the process of capturing and permanently storing CO_2 from biomass energy generation. There are currently no commercial scale BECCS operations within the UK, but several are under development. Interestingly, all National Grid's Net Zero Future Energy Scenarios (FES) deploy BECCS by 2028 with rapid increase in capacity by the 2030s.[20] Biomass is only considered renewable if it comes from a sustainable source, where new plants are grown to replace those used for fuel. There are environmental risks associated with biomass fuel production including negative ecosystem impacts if improperly managed.

Across Greater Lincolnshire there is little evidence of widespread domestic or commercial biomass energy generation. There are however clear signs that there is increasing interest in the alternative technology.

The Brigg Biomass Power Plant is a 40MW straw-fired power station near Brigg, North Lincolnshire. The waste to energy biomass power project was developed by BWSC, a joint venture who purchased the project from UK based Eco2 in 2013, and the scheme was completed in 2016. The site claims to generate sufficient energy for more than 70,000 UK households a year, but feeds back into the national grid which offsets up to 300,000t of CO_2 emissions annually. The straw-fuelled plant uses more than 240,000t of wheat straw feedstock annually, which should be sourced from producers within a 50-mile radius.

The Sleaford Renewable Energy Plant has a generation capacity of 38MW and commenced operations in 2014. It generates electricity using sustainable fuel sources, the plant is designed for the clean and efficient combustion of straw, the by-product of wheat production, sourced from farms within a 50-mile radius of Sleaford. Ash produced by the plant will be recycled as crop fertiliser. The surplus heat generated from the plant is used to provide heating free of charge to Sleaford's public swimming pool, Sleaford Bowling Centre, Sleaford Town Football, William Alvey Primary School, and North Kesteven District Council's office in the town.

Drax Power Station in Yorkshire is the largest biomass plant in the UK, having converted three of its six generators from coal but has been heavily criticised. Back in 2016 it was burning more than the UK's entire wood production, and critics argue that the demand and subsequent emissions were too significant to be deemed sustainable. To address their fuels sustainability performance, Drax have been investing in BECCS. C-Capture (spin off from University of Leeds) is involved in a collaborative project funded by Department of Business, Energy and Industrial Strategy (BEIS) to scale up and

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[19] Biomass for UK energy - POST (parliament.uk)
[20] https://www.nationalgrid.com/stories/journey-to-net-zero-stories/eso-why-we-need-negative-emissions-net-zero

deploy its technology at Drax power station in North Yorkshire. The project will see CO_2 captured from biomass used in power generation, and show how C-Capture's technology can be used as part of a process to remove existing CO_2 from the atmosphere (BECCS).

With Greater Lincolnshire's unique position in the agriculture sector and the East Coast Cluster, there is potential for huge opportunity to attract investment into biomass in the region. The wealth of agricultural land can provide not only waste product but explore the potential for dedicated energy crops beyond current position. It is recommended that biomass strategies and investment should be closely linked to CCS. This however should be reviewed with social, economic and environmental factors integrated to ensure long term sustainability of energy generation.

The use of Biomass as an energy source has to be balanced with the importance of food production to the Greater Lincolnshire Region. Currently, 30% of country's vegetables are grown in the region and currently there are plans to double the contributions of the agri-food sector.[21] Any reduction in agricultural production to allow for Biomass would have to consider these factors, can production be met elsewhere and would be economically viable for the Greater Lincolnshire region to make the shift.

Whilst this study is providing a measured view of alternative and renewable energy across the region, it is worth noting that Biomass is extremely controversial and unpopular. Recently Drax has been criticised for repeatedly exceeding air pollution limits, and reports in recent years show pellets for biomass in Europe coming from old growth forests which is not deemed to be a sustainable approach. With this in mind, Greater Lincolnshire should undertake a review of biomass across the region, integrating wider sustainability impacts such as air quality and biodiversity, as well as socio-economic impacts from an agriculture perspective. It would be of benefit to have a clear strategy and guidance for the region on the Greater Lincolnshire stance on biomass as an alternative energy source.

Energy From Waste

Energy from Waste (EfW) forms part of the circular economy, recovering benefits from resources when they are no longer in use or fixable. Generating energy (electricity or heat) from waste is part of the waste hierarchy, see diagram. Energy generation from waste (recovery) is below the preferred options of reducing waste, re-use, recycling and composting but is preferable to landfill.

Historically in the UK, many of the early incinerators were disposal-only plants, which simply burned waste to reduce its volume. Focus should be on reducing waste volumes, however there will always be a proportion of waste that cannot be prevented or recycled. Therefore, EfW is likely to remain important.

EfW facilities burn non-recyclable waste, with the resulting steam powering a turbine, which generates electricity. Some EfW plants are

Figure 8 Energy Saving Trust, waste hierarchy

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[21] Agri-food Sector | Greater Lincolnshire LEP

able to provide direct heating for local properties. The waste going to an EfW would otherwise have been disposed of in a landfill site.

The EfW plant in Lincolnshire at North Hykeham has been in operation since 2014 and treats up to 190,000 tonnes of residual waste, diverting it from landfill and exporting 105,000 MWh of electricity in the process. The waste arrives on 10 and 25 tonne collection vehicles from the local Lincoln area and 5 waste transfer stations based at Boston, Gainsborough, Grantham, Louth and Sleaford.

The proposed Boston Alternative Energy Facility will be a state-of-the-art power-generation facility located south of Boston, Lincolnshire on the Riverside Industrial Estate. This facility will be capable of generating 102 MW of renewable energy, of this amount, 80MW will be exported directly to the National Grid for distribution by National Grid ED. The facility is currently moving through the planning process with a decision expected in July 2023.

There are generally two types of outputs, solid waste which includes metals and ash from the incinerator. At Lincolnshire the metals are collected and recycled, and the incinerator bottom ash (IBA) is used as aggregate in the construction industry. The air pollution control residue (APCR) goes to a waste treatment facility for further treatment. The steam powers the turbine and is then cooled before being fed back into the boiler.

There are concerns around EfW from a sustainability perspective, however there is no denying the role EfW can play in energy generation. Based on the above, it is unlikely that EfW will experience widespread growth across the region but will remain a part of the energy strategy across Greater Lincolnshire. It is suggested that feasibility studies should be considered for landfill sites across the region to determine if the waste is suitable for use in EfW, however it is critical that these are seen to complement recycling and waste reduction schemes, rather than compete with.

There is an opportunity to integrate a district heating system into the Lincoln EfW plant to utilise the excess heat from the plant to provide heating to homes in the region. An example of a successful EfW plant providing heat to homes through a district heating system is Sysav Power Plant in Malmo, Sweden. This plant process 600,000 tons of waste annually while providing 60% of the heating requirements of Malmo.[22] The plant in Lincolnshire has been designed and constructed to allow for the integration of a district heating system but to date this has not been implemented. According to the Lincolnshire County Council this is because they have not been able to secure necessary off-takers for the heat.[23]

Anaerobic digestion (AD)

Anaerobic digestion can be used to generate energy from organic waste like food and animal products. In an oxygen-free tank, this material is broken down to biogas and fertiliser. The Energy Saving Trust estimates that if the UK treated 5.5 million tonnes of food waste this way, the energy

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[22] Welcome to Sysav | Sysav – tar hand om och återvinner avfall

[23] Energy from Waste – Lincolnshire County Council

generated would serve around 164,000 households while saving between 0.22 and 0.35 million tonnes of CO_2, in comparison to composting.[24]

Lincolnshire Wildlife Trust (LWT)[25] and Lincolnshire County Council have been trialling road verge biomass harvesting with a tractor-powered suction flail, where the vegetation was then used to generate energy through nearby farms on-site anaerobic digestion plants. This scheme has had challenges as verge vegetation does not align to waste codes therefore cannot be used in anaerobic digestion plants; this is an example of where collaborative efforts could overcome regulatory barriers for new energy generation innovations.

As part of the wider energy strategy across the Greater Lincolnshire region, it is worth considering how feasible and beneficial it could be to expand this initiative across the wider region.

Nuclear

Nuclear energy is a form of energy released from the nucleus, the core of atoms, made up of protons and neutrons. This source of energy can be produced in two ways: fission – when nuclei of atoms split into several parts – or fusion – when nuclei fuse together. The nuclear energy harnessed around the world today to produce electricity is through nuclear fission, while technology to generate electricity from fusion is at the R&D phase. Nuclear power contributes 15% of UK electricity[26] from 6.5GW of nuclear capacity. The UK government predict that up to 24GW of new nuclear capacity will be required by 2050 to provide 25% of electricity.[27] At a large scale, nuclear is low carbon provided from a relatively small land area. Hinkley Point C, located in Somerset, will power 6 million homes from a quarter square mile.

The UK government has confirmed that the West Burton Power station site in North Nottinghamshire on the Lincolnshire border will home the STEP (Spherical Tokamak for Energy Production) prototype fusion energy plant. The plant is intended to be operational by the early 2040's, with £220million pledged by the government. The scheme will be led by the UK Atomic Energy Authority.[28]

District Heating Systems

Heat networks (also known as district heating systems) supply heat from a central source to consumers, via a network of underground pipes carrying hot water. Heat networks can cover a large area or even an entire city or be fairly local supplying a small cluster of buildings. This avoids the need for individual boilers or electric heaters in every building. Heat networks are sometimes described as "central heating for cities".[29] There are many possible technologies that can provide the input to a heat network including power stations, energy from waste (EfW) facilities, industrial

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[24] https://energysavingtrust.org.uk/generating-energy-waste-how-it-works/
[25] DEV_CASE_Roadside Verge Management Lincs1_2019.12.13.pdf (wildlifetrusts.org)
[26] Nuclear Power in the United Kingdom |UK Nuclear Energy - World Nuclear Association (world-nuclear.org)
[27] Nuclear energy: What you need to know - GOV.UK (www.gov.uk)
[28] Nuclear energy: What you need to know - GOV.UK (www.gov.uk)
[29] Energy Bill [HL] 2022-23, parts 7-10: heat networks, smart appliances, load control and energy performance of buildings - House of Commons Library (parliament.uk)

processes, biomass and biogas fuelled boilers and Combined Heat and Power (CHP) plants, gas-fired CHP units, fuel cells, heat pumps, geothermal sources, electric boilers and solar thermal arrays.

Heat networks have the most potential to reduce carbon emissions and costs when implemented for the benefit of existing building stock, rather than for thermally efficient new buildings, which have a much lower heat demand.[30]

A key focus on heat networks should be in conservation areas, where maintenance of the building character makes additional insulation hard and in off-gas grid areas where heating fuels are more expensive and produce higher carbon emissions than natural gas. In rural areas across Greater Lincolnshire, there are areas which are off-gas grid that may benefit; please note that the lowest costs are experienced in high density urban areas as they offer a communal solution as the pipe infrastructure is expensive. Therefore, further feasibility studies should be undertaken to progress DHS viability. Where renewable heat is already available nearby to new development then heat networks should be considered. Examples of available renewable heat sources situated nearby to proposed new development are the energy from waste plant in Lincoln and the biomass power station at Sleaford.

As heat networks work best across high density urban areas, heat networks are unlikely to be suitable as a widespread solution across Greater Lincolnshire. It is recommended that high intensity users in urban areas consider this approach as part of a combined energy forum; linking together organisations such as the NHS trusts with local industrial businesses to power residential heating.

For Central Lincolnshire, a study into heat networks has been undertaken, identifying 'heat dense' areas that would be most suitable for heat networks. The areas of highest heat density tend to be the historic centres which are often conservation areas, which makes retrofitting options that would impact their visual appearance difficult such as external insulation/cladding, energy-efficient glazing, and interior wall insulation. Additionally, ground or air source heat pumps in such locations can also be challenging due to space constraints and visual impact. As such, HNs with a low carbon heat source can be the optimal route to the decarbonisation in the absence of many other alternatives.

Local Authority Name	Estimated number of heat networks
North Kesteven	5
Lincoln	25
West Lindsey	7
Total	48
Estimate of single building communal heating systems	41
Estimate multi-building heat networks	7

Figure 9 Catapult, heat network requirements

Through the Heat Network Transformation Programme (HNTP) the government is working with industry and local authorities and investing over half a billion pounds in funds and programmes, to develop new heat networks and improve existing ones. Capital grant

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[30] Decentralised energy: powering a sustainable future | The Carbon Trust

support is available for the development of new and existing low and zero-carbon heat networks, in a series of quarterly application rounds until the scheme closes in 2025.[31]

Battery storage

Across the UK, electricity storage technologies are deploying at different scales, from domestic batteries to larger grid-connected facilities, and are providing a wide range of benefits. It is highly likely that the need for electricity storage will rise as the UK increases the volume of variable, non-dispatchable renewables on the system, and increase peak demand through the electrification of heat and transport. There are a range of technologies that can provide electricity storage such as Chemical, Electrical, Mechanical and Thermal, from grid scale through to domestic level. It is estimated that approximately 30GW of capacity will be needed in 2030 and 60GW in 2050[32,] to maintain energy security and cost-effectively integrate high levels of renewable generation.
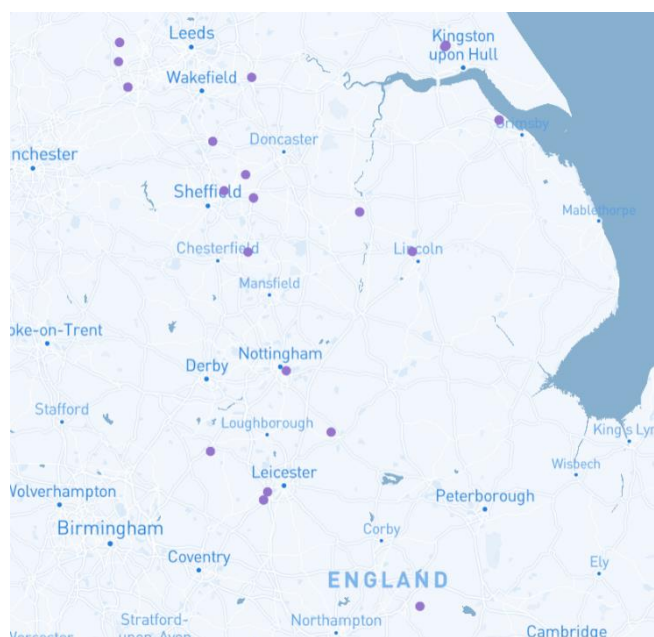
Figure 10 BEIS, battery storage projects

BEIS tracks renewable/alternative energy solutions that are either planned or in operation, which includes battery storage. Figure 9 demonstrates battery storage is far from widespread across Greater Lincolnshire, with only ca. current 19 projects that could be identified; the capacity for energy generation appears to outstrip battery storage capacity significantly. To address this, and allow for management of energy supply and demand, investigating new approaches such as Vehicle to Grid strategies and understanding what barriers are preventing a greater increase in battery storage would be beneficial. It is worth noting that skills and certification scaling up to respond to demand is critical to the success of battery storage UK wide.

Offshore Wind

Whilst offshore wind has been excluded from this study for the energy options analysis and future demand mapping, as it connects at National Grid level above the DNOs 132 kVA level, it has been referenced as a key part of the regions overarching energy strategy.

The are currently eight wind farms situated off the Lincolnshire coast, of which the largest is Hornsea 2. Hornsea 2 Wind Farm is located approximately 89km off the Lincolnshire coast in the North Sea.

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[31] Green Heat Network Fund (GHNF): guidance on how to apply - GOV.UK (www.gov.uk)
[32] Energy Storage Landscape - Energy Systems Catapult

The farm has 165 Siemens Gamesa 8MW turbines generating 1.3GW of electricity,[33] making it the largest offshore wind farm in the world.

Table 3 Offshore wind farms Greater Lincolnshire

Name	Turbines	Operational	Capacity (MW)	Developer
Lynn & Inner Dowsing	54	2008	194	Centrica
Lincs	75	2013	270	Centrica
Humber Gateway	73	2015	219	E.on
Westermost Rough	35	2015	210	Ørsted
Race Bank	91	2018	573	Ørsted
Hornsea One	174	2020	1218	Ørsted
Triton Knoll	90	2022	857	RWE
Hornsea Two	165	2022	1400	Ørsted
Hornsea Three	300	2025	2400	Ørsted
Hornsea Four	180	2027	1800	Ørsted
Race Bank Extension	TBA	TBA	573	Ørsted
Outer Dowsing	TBA	2030	1500	Total Energies and Corio Generation

Currently, there are four more wind farms proposed to be built off the Lincolnshire coast in the next 10 years. These additional wind farms will bring the total generating capacity of Greater Lincolnshire offshore wind to 11.2GW of electricity.

As well as providing renewable energy for the Greater Lincolnshire region and the UK, the offshore wind industry has been a major boost for the port town of Grimsby in North East Lincolnshire. The Port of Grimsby has seen a transformation with the world's foremost developers and manufacturers of wind turbines locating themselves there. In 2019 Ørsted, a Danish renewable energy company, opened the East Coast Hub at the port of Grimsby, the world's largest offshore wind operations and maintenance centre.[34]

Onshore Wind

Electricity from onshore wind can be used to generate electricity at both a national grid level, where the electricity generated is fed directly into the national grid, and at a distributed level, where the electricity generated is used directly by those generating it. Currently in the UK, there are more than 2,500 onshore wind farms in operation, generating 14.5 GW of electricity which makes up 11% of the UK's electrical needs.[35] In 2015, using the National Planning Policy Framework, planning restrictions on onshore wind farms were tightened effectively placing a ban on them. However, the government has recently indicated that it will relax the planning regulations.

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[33] Hornsea Two offshore wind farm (hornseaprojects.co.uk)

[34] World's Largest Offshore Wind Operations Centre | Ørsted (orsted.co.uk)

[35] Onshore vs offshore wind energy: what's the difference? | National Grid Group

The Greater Lincolnshire Region provides good conditions for locating onshore turbines and wind Farms with large areas of flat open land and proximity to the coast. Average wind speed in the region range from 8-10 knots inland to 10-15 knots in coastal regions.[36] Despite this there is internal resistance to the use of onshore wind as a form of generating renewable electricity within the region.

Since 2005, there have been planning application for 40 onshore wind projects.[37] Of these, 11 are Operational generating 17.8MW of electricity. The last project that was granted planning permission was in March 2015.

The Green Masterplan published by Lincolnshire County Council in 2019 makes no mention of the use of onshore wind to meet the county's net-zero emissions targets.[38] Currently there are no planning permission for onshore wind projects being sought within the region. However, through the Central Lincolnshire Local Plan, the councils of North Kesteven, West Lindsey and City of Lincoln have identified suitable locations for small, medium and large wind energy development throughout the region. Any wind developments identified for these locations will be supported through the planning process. All three districts see onshore wind as necessary for their goal of net zero carbon by 2050 or before. Also, the East Lindsey District Council have teamed up with Norwegian company Ventum Dynamics to run a trial using vertical turbines to generate electricity to be used at source.[39]

Onshore wind is another tool to allow the region to reduce its emissions and achieve the net-zero targets. Currently it is underutilised across the region for a number of factors. Onshore wind projects in particular shows how internal politics and market drivers can cause conflict in trying to achieve a common goal.

Hydrogen

Hydrogen can be a low carbon energy source that the UK government is intending to form a key part of the roadmap towards decarbonised energy.

There are very few natural abundant sources of hydrogen, which means that it needs to be created. This is commonly through steam methane reformation, where natural gas is reacted with steam to form hydrogen. This is carbon intensive – made low carbon from CCS which produces 'blue hydrogen'. Hydrogen can be produced by electrolysis where electricity splits water into hydrogen and oxygen, which produces 'green carbon' or zero carbon hydrogen when the electricity used is renewably sourced. The majority of hydrogen produced globally at present is carbon intensive, therefore hydrogen only forms part of the net zero solution if it is manufactured in a low carbon way.

BEIS priorities include industrial fuel switching, transport, market interventions, hydrogen for heating and gas blending and storage. At present, hydrogen supply is a key challenge for both quantity and stability of supply. Current UK hydrogen production and use is heavily concentrated in chemicals and

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[36] Where are the windiest parts of the UK? - Met Office

[37] Renewable Energy Planning Database: quarterly extract - GOV.UK (www.gov.uk)

[38] Initial Action Plan 2020-2025 – Lincolnshire County Council

[39] Skegness wind turbine trial to light up pier in UK first - BBC News

refineries and is produced form natural gas without CCS therefore high carbon intensity. Hydrogen is also used in the transport sector to a smaller degree, as hydrogen cars, trucks, buses and marine vessels are already operating and supported by a network of refuelling stations, with plans for hydrogen trains and aircraft underway.

For residential use, there is a trial scheme where hydrogen and natural gas as blend will be supplied to over 650 homes in the north-east of England. Across Greater Lincolnshire, hydrogen is not yet widely used as an energy source. However, there are many projects upcoming where hydrogen will be created or required. Hydrogen Valley (Cadent) incorporates Greater Lincs and could be an opportunity to demonstrate cluster users and producers. GLLEP have been engaging with national and regional hydrogen experts to determine the opportunities within hydrogen.

For future energy landscapes, there is a national hydrogen strategy with a roadmap to market development. This details that small scale production with on site use and trial projects will occur in 2023, with certification schemes not being rolled out to market until 2027. Alongside the market development, there is government funding including £240m Net Zero Hydrogen Fund (NZHF) to provide capital expenditure support for low carbon H2 production projects.

Across the midlands there is a new programme to support the creation of a new hydrogen economy. HyDEX includes universities, large businesses and SMEs as well as other partners to accelerate hydrogen market growth whilst providing skills to support the growth. The £4.99m programme, funded via the RED Fund scheme run by Research England, which is part of UK Research and Innovation (UKRI), will see the ERA university partners making available their £111m worth of hydrogen facilities, large-scale demonstration programmes, and research capabilities to regional businesses.

In wider industry, JCB have developed an internal combustion engine (ICE) that runs on hydrogen. This is more appropriate for larger vehicles as fuel cells proved too expensive and not robust enough, therefore smaller vehicles are converting to EV. Hydrogen supply is a key challenge and is currently limited widespread development.

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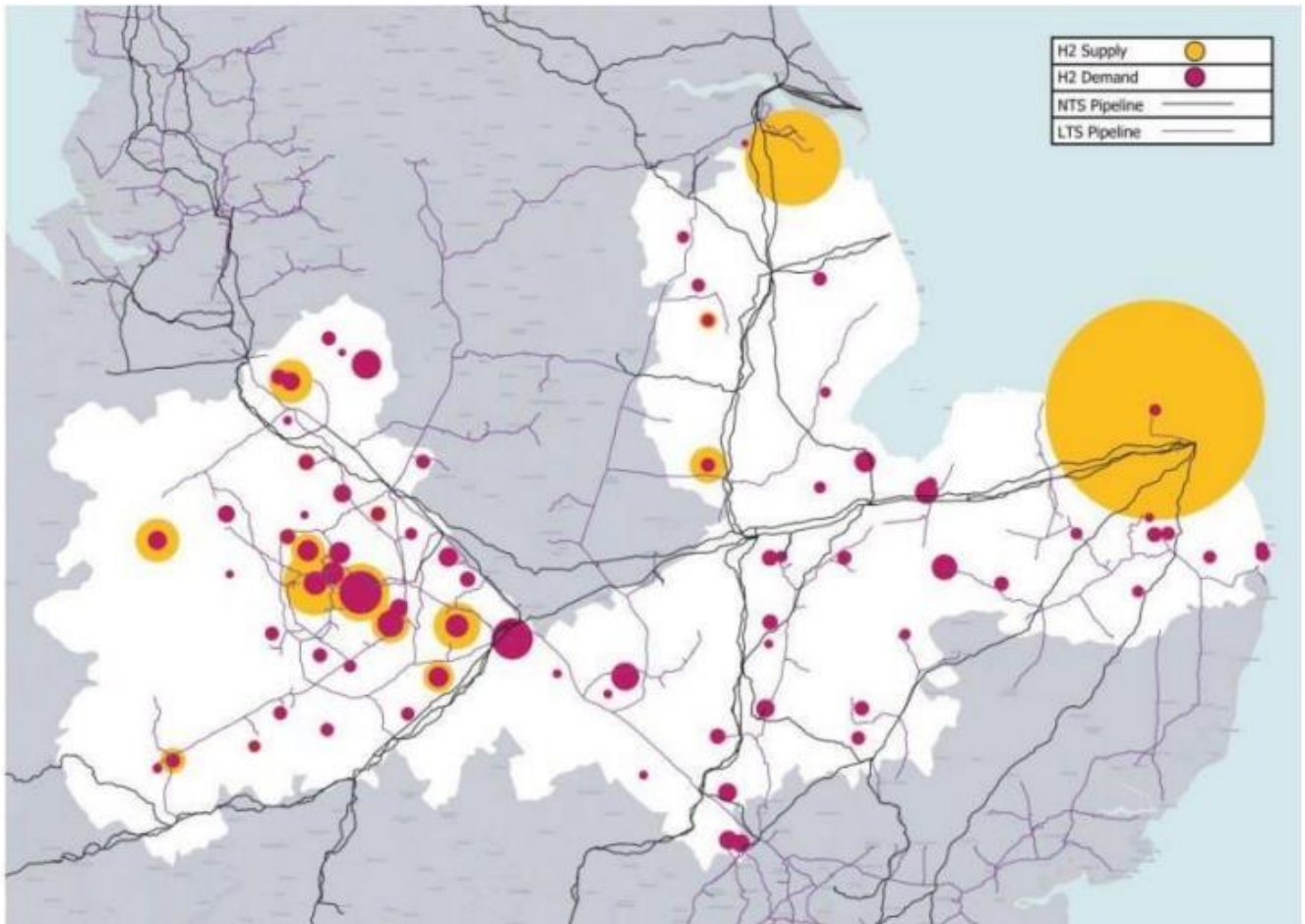
Figure 11 Hydrogen valley supply and demand

Power generator VPI and the world's largest hydrogen producer, Air Products, have signed an agreement to jointly develop a flagship 800MW low-carbon hydrogen production facility in Immingham. The majority of hydrogen produced by the 'Humber Hydrogen Hub' or 'H3' would be used to decarbonize VPI Immingham's existing power production. The H3 project looks to capture up to two million tonnes of CO_2 per annum and contribute to achieving Net Zero in the wider Humber industrial region by 2040. The H3 project has submitted an application for 'Strand 1' funding as part of the Net Zero Hydrogen Fund (NZHF). Administered by UK Research and Innovation (UKRI), the fund has the objective of enhancing hydrogen production at scale. It will contribute towards the UK Government's ambition of realizing 10GW of low-carbon hydrogen production by 2030.

Greater Lincolnshire has been chosen as the area for one of the worlds first low carbon hydrogen towns within the next decade as Cadent and Equinor have joined forces to develop the technical assessments and concepts for hydrogen production, storage, demand and distribution of heat. Greater Lincolnshire has been chosen as the Humber is an ideal location for a pilot study due to the number of proposed low carbon hydrogen production projects including H2H Saltend. Cadent is the gas network operator for the Greater Lincolnshire area, therefore it will be exploring the conversion of

its distribution infrastructure for hydrogen rather than natural gas. The research project is initially aimed at a pilot study, with the intent to extend out to the North of England and East Midlands.

Please note that as the majority of hydrogen projects are at early stages of planning, and there are no operational large scale hydrogen projects either supplying or using hydrogen as the main energy source across the region at present. Therefore, whilst it is likely to transform the energy landscape across the region, it is difficult to predict with any certainty when hydrogen will be widely utilised. It is anticipated that this is to form a key part of the energy supply, and energy sector industry, in mid 2030s.

Solar

Solar panels, also known as photovoltaics, capture the sun's energy and convert it into electricity. Residential solar energy is the world's fastest growing renewable energy solution.[40] At a domestic level, Solar PV systems are made up of several panels with each panel generating around 355W of energy in strong sunlight. Typical systems contain around 10 panels and generate direct current (DC) electricity. As electricity used for household appliances is alternating current (AC), an inverter is installed along with the system to convert DC electricity to AC. Electricity is generally used on site, or exported back to the grid.

After the UK Government's Feed-in Tariff renewables incentive scheme closed in March 2019, the Smart Export Guarantee was brought in which provides support to small-scale renewable energy generators for exporting electricity back to the grid.

There are numerous solar Nationally Significant Infrastructure Projects (NSIP) proposed across the Greater Lincolnshire area, these are detailed in the table below. A solar project is classified as NSIP if its generating capacity is more than 50MW. In addition to these major developments, there are seventy-nine developments under 50MW registered on the Renewable Energy Planning Database for development in the area.

Details	Developer	Capacity (MW)	District
Springwell Solar Farm	EDF Renewables UK and Luminous Energy	800	North Kesteven
Mallard Pass Solar Farm	Canadian Solar and Windel Energy	350	South Kesteven
Gate Burton Energy Park	Low Carbon	500	West Lindsey
Cottam Solar Project	Island Green Power	600	West Lindsey
West Burton Solar Project	Island Green Power	480	West Lindsey

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[40] Solar Photovoltaic Panels | How Solar PV Works | E.ON (eonenergy.com)

Tillbridge Solar Project	Tribus Clean Energy and Canadian Solar	500	West Lindsey
Temple Oaks Renewable Energy Park	Ridge Clean Energy	250	North Kesteven
Heckington Fen Solar Park	Ecotricity	500	North Kesteven
Beacon Fen Energy Park	Low Carbon	600	North Kesteven

Table 4: Greater Lincolnshire Area Solar Nationally Significant Infrastructure Projects

Large solar projects are contentious across Greater Lincolnshire, due to many of the proposals being on valuable farmland. From research during this project, whilst solar will undoubtably form a major proportion of future energy generation, there is likely to be more benefit from a collaborative approach to small scale domestic energy generation to reduce residents' energy costs, easing the cost of living crisis and developing energy resiliency across the region. This approach should be linked closely with NPg and NGED to ensure that connections back to the grid are not prohibitive.

5.0   FUTURE ENERGY SCENARIOS

Building on National Grid's four national scenarios, NPg have modelled five scenarios[41] demonstrating how energy use might change up to 2050. They set out a range of decarbonisation pathways, titled 'Leading the Way'; 'Consumer Transformation'; 'System Transformation'; 'Steady Progression'; plus 'Net Zero Early' allowing for a scenario where the region decarbonises faster than the national average.

NGED have developed Distribution Future Energy Scenarios[42] (DFES) which outline the range of credible futures for the growth of the distribution network. Broadly aligning with the National Grid Future Energy Scenarios, these encompass the growth of demand, storage and distributed generation, also low carbon technologies such as Electric Vehicles and Heat Pumps. Of the four scenarios, three are compliant with the UK's target to reduce carbon emissions by 100%, achieving 'net zero' by 2050. A fourth non-compliant scenario is also modelled. For the East Midlands, NGED have estimated that in 2022 only 1% of homes have heat pumps, with 3% of vehicles being EV. However, the recent energy crisis has seen renewed interest in on-site electricity generation across homes and businesses with uptake of both of these low carbon technologies accelerating. New policies and support have emerged to encourage decarbonisation of heat and transport across the UK.

5.1   FUTURE ENERGY: INVESTMENT

Increased electrification of heat and transport, combined with renewable energy generation, require significant investment in energy infrastructure. It is anticipated that moving towards net zero, low carbon technologies, energy generation and energy efficiency will require a series of network intervention costs to address network needs.

Whilst the structure of the business plans and the investments differ between the two DNOs that cover Greater Lincolnshire, they both feature net zero / decarbonisation as high priority areas. Both plans show methodology to determine the predicted future energy scenarios aligned to government policy. For NPg[43], "Optioneering around solving network constraints by a mix of price-driven and DNO-contracted customer flexibility, network flexibility and conventional network reinforcement, to determine network investment required in 2023-28". Their investment plan is focused on a process driven approach: optimising network monitoring to identify constraints, utilising load reinforcement and maximising decarbonisation. During 2023-28 planned investment spend is £3.3bn, an annual spend of £661.3m. This is split into:

- Asset Resilience – 34%
- Decarbonisation – 26%

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[41] Northern Powergrid Future Energy Scenarios 2022 (odileeds.github.io)
[42] National Grid - Distribution Future Energy Scenarios Application
[43] NPg_Our_business_plan_for_2023_28.pdf (northernpowergrid.com)

- Reliability and Availability – 23%
- Connections – 6%

Increase in spend compared to the previous period (2015-2023) has been driven by decarbonisation, which 96% of the increase is attributable to. Decarbonisation requires capacity for heat pumps, EVs as well as digitalisation and smart grid technology.

The most significant change in network management is anticipated to be the increased data analysis enabled through sensors, storage and analysis tools, that active network management requires. In areas where energy demand outstrips capacity, there are methods of managing energy demand which are driven by monitoring limits on networks and allocating maximum capacity to customers in that area, typically based on connection application dates.

This method is called Active Network Management (ANM). This Last In, First Out (LIFO) hierarchy prioritises the oldest connections when issuing capacity, but is scalable so that new entrants will get access to the capacity when it becomes available. Where constraints are driven by DNO limits they may be referred to as Distribution Active Network Management (DANM) and for National Grid constraints Transmission Active Network Management (TANM). This includes customer price driven flexibility. This investment appears to form the bulk of the next phase of investment until circa 2030, when increased investment into management of low carbon electrification into the network will occur.

NGED have published their business plan for 2023 – 2028, with investments focusing on the journey to net zero and cyber security. The planned investment is £6.7bn, an increase of £1.4bn with an average annual expenditure of £1.34bn. It is noted that East Midlands is attributed 30% of shared costs.

Similarly to the NPg plan, the drivers are cited as decarbonisation and low carbon technologies. Whilst NPg doesn't cite local development plans, NGED state this to be a driver behind enhanced loads requirements. NGEDs approach includes flexibility services to manage demand in real time to remove need for reinforcement. Flexibility services includes local management of generation output, load and power flows, with predicted savings of £94m.

Load related reinforcement

Load related reinforcement investment relates to providing additional capacity on the network to facilitate new connections as well as load growth, for both demand and generation, covering connections, general reinforcement, fault level reinforcement and new transmission capacity charges.

EHV (33kV and 66kV) level
NPG
- Load growth based on scenario planning
- Options analysis for network areas
NGED
- EHV forecasts are expected to be low volume and high cost
  - Majority of asset replacement requirements anticipated for EHV
Load related reinforcement at HV/LV level

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NPg

- Techno-economic modelling of network impacts and solutions
- Constraints anticipated to be higher on LV circuits, driven by electrification of heat and transport

NGED

- LV and HV forecasts are expected to be high volume and low cost

Fault level related reinforcement

The number of generators and large induction motors connected to the network can cause the fault current to exceed the rating of the circuit breakers, overhead line and cables. Temporary operational limitations are used as interim solutions until equipment is replaced, which can affect network performance and constrain network capacity. Distributed generation connections can also increase fault levels, which is expected in the future.

NPg

- Traditional approach was operational routines/alternative running arrangements to manage constraints
- Future approach to remove operational restrictions to increase fault level headroom and flexibility
  - Intended to remove barriers for low carbon generation

NGED

- NGED have identified sites that are higher risk alongside growth projections for investment or alternative network running arrangements.

Looped services

NPg

- Low voltage services to properties that are shared between customers are known as looped services
- Can be a barrier of low carbon technologies due to limited capacity on shared cables
- Solution is to de-loop services with new cables, which can be disruptive. NPg intend to do this as a reactive service when customers request low carbon technology connections.

NGED

- NGED are intending to proactively unbundle the looped service cables to address the growing demand for low carbon technologies to remove constraints and demands for customers, unlike NPg who will be reactive to customer demand.

NGED[44] predict an additional 1.5 million electric vehicles and 600,000 extra heat pumps across their area coverage, with adaptive plans that can flex to meet greater demand if change happens at a greater pace than predicted. For NPg, predictions are for 941,000 electric vehicles, 309,000 heat pumps whilst delivering a 20% reduction in connection lead time.

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[44] NGED Business Plan

Active network management (ANM) appears to be relatively early on in maturity across the two DNOs, but with a clear trajectory to increase ANM over the next phase of the business plan. For NPg, four ANM zones in operation by 2023 with an estimated 540MW of flexibility. NGED rolled out ANM systems in 2014 but these are not widespread.

There are clear synergies between the two DNO business plans. However, where the plans differ, particularly regarding looped system approach and Local Area Energy Plans (LAEP), it is recommended that engagement with the DNOs is undertaken to understand the following:

- Possibility of aligning approaches between the DNOs further to gain consistency of energy management across Greater Lincolnshire, including ANM
- Whether generation of LAEPs across Greater Lincolnshire with two differing DNO approaches will result in significant changes across the region in energy approach
- Where there are targeted areas of improvement / upgrades to the infrastructure, if these areas can be used as pilot studies to drive energy efficiency and resilience of energy supply i.e. integrating connections for renewable and low carbon technologies.
- Greater Lincolnshire LA's to input collaboratively in terms of upcoming development, demand and economic growth areas to allow DNOs to accurately model for the DFES approach

6.0 SECTOR FOCUS

Within Greater Lincolnshire there are significant sectors where energy demand and supply is critical to development. Greater Lincolnshire LEP (GLLEP) have identified sectors which are key to the economic development of the region which are Agri-Food, Manufacturing, Visitor Economy, Energy, Health and Care, Ports and Logistics. This study has aligned to those key economic sectors, focusing on the sectors where there is either significant energy demand or opportunity. Additionally, residential sector has been deemed as a sector where energy is critical to ensure ongoing investment.

Key sectors that have significant energy demand, either current or predicted, have been engaged with, to understand the current situation and gain an insight into predicted development and significant changes.

6.1 RESIDENTIAL

The residential sector is influenced by existing demand, predicted growth through direct population growth and through attracting those from other regions. Housing and the economy in Greater Lincolnshire are inextricably linked, contributing significantly to the local economy by creating two jobs for every house built.[45]

Greater Lincolnshire is committed to housing growth, with Local Plans working towards the delivery of 100,000 new dwellings by 2031.[46] The right mix of housing helps to attract and retain the workforce needed to enable growth, whilst new development generates employment opportunities and encourages spending in the local economy. Planned new developments will provide major growth opportunities along nationally important investment corridors. Our study has tracked all developments given to us by local authorities and planning portals.

Across the residential sector, decarbonisation of building stock is anticipated to be achieved through energy efficiency retrofit, low carbon heating (heat pumps), smart tariffs and demand side management. The impact of the above measures on domestic energy demand is key to enabling accurate energy forecasting; with increased efficiencies of domestic building stock, future demand may be over-estimated. At present, forecasted energy consumption has predicted a rapid increase in domestic demand driven through widescale adoption of heat pumps and EV charging requirements. NGED have commissioned a study to "*Develop an understanding of the electricity demand profile of UK domestic building stock pre- and post-retrofits to building fabric. Produce a methodology for integrating pre- and post-retrofit domestic demand profiles into network forecasting. Assess the potential savings on network reinforcement and flexibility from accounting for energy efficiency in demand forecasting. Perform an economic assessment of the potential benefits to networks from increased penetration of domestic retrofit interventions.*"[47] This project is expected to complete in July 2023, and consideration should be given to how Greater Lincolnshire can learn from the outcomes of

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[45] Priorities and Plans | Greater Lincolnshire LEP
[46] National Grid - Demand Forecasting Encapsulating Domestic Efficiency Retrofits (DEFENDER)
[47] National Grid - Demand Forecasting Encapsulating Domestic Efficiency Retrofits (DEFENDER)

the study and implement retrofit programmes across the region accordingly, (this may be an enhancement of existing schemes rather than new initiatives).

Sustainable urban extensions (SUEs) will accommodate the vast majority of the UK's new homes over the next few decades as the supply of brownfield and city centre sites depletes. SUEs have significant scope to incorporate green energy into the design. Large-scale renewable, locally sourced energy such as combined heat and power can be considered and incorporated into the environmental design. This has been considered on Queen Elizabeth Road, Lincoln.

RESIDENTIAL DEVELOPMENT CASE STUDY SELECTION

An outcome required from this study was the identification of opportunities in Greater Lincolnshire where a more collaborative energy approach can deliver commercially viable net zero carbon development and achieve the wider objectives of this energy options analysis.

For this study, all residential housing developments have been categorised into the following planning priorities:

- Short term, 1-3 years
- Medium term, 3-10 years
- Long term, 11+ year

In order to establish the two housing sites a short list of twelve housing sites was formed based on the following criteria:

- Greater than 50 units by 2025
- Planning permission granted
- Construction has not begun and will begin in the next two years.

Following review between RLB and the IG it was confirmed that the two development schemes to be used as case studies for wider application of learned issues across the Greater Lincolnshire area are the **Lincoln Western Growth Corridor** and **Boston Toot Lane**.
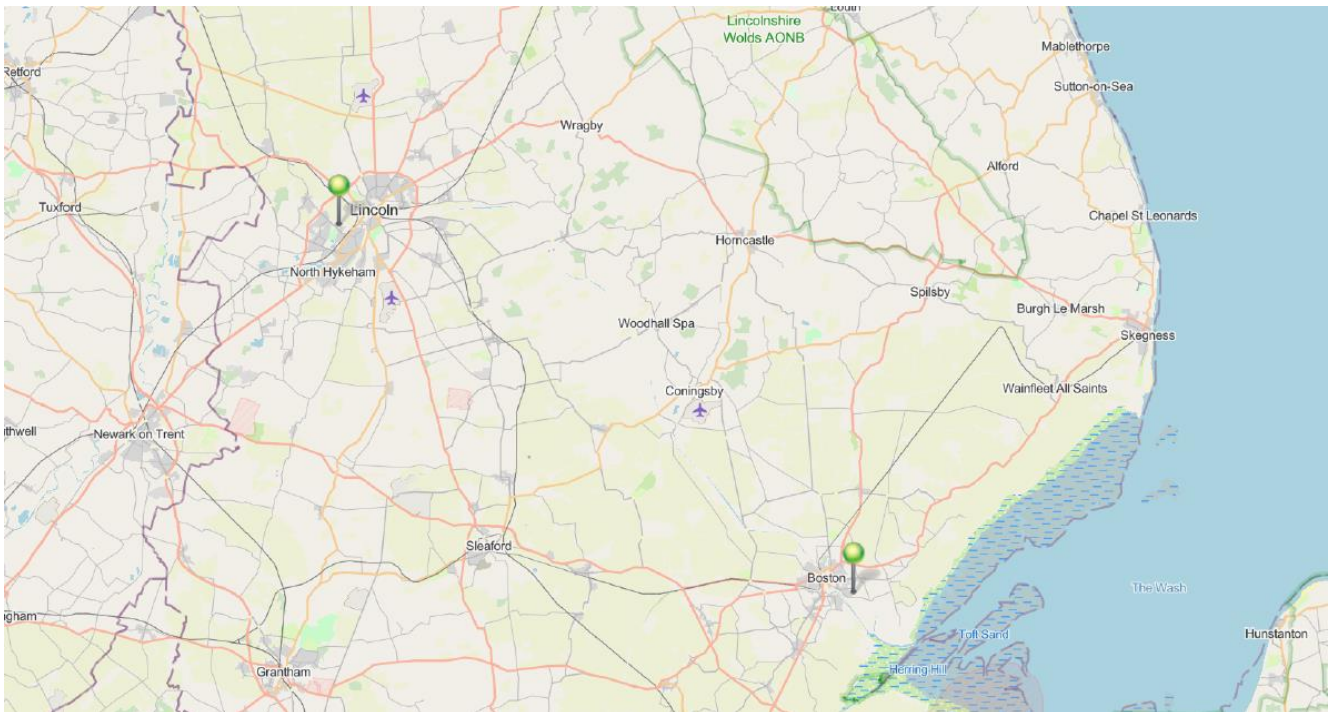
Figure 12 Location of chosen housing sites

These sites were selected based on the following factors:

- Ability for learning from the sites to add value to the overall commission / study
- Ability for this learning to be replicated through Greater Lincolnshire
- One Brownfield and one Greenfield site
- One Sustainable Urban Extension and one edge of town / semi-rural site
- Predicted housing values close to the Lincolnshire average
- Substation availability
- Scale and nature of development

Although the two sites do not reflect the full range of housing units, the combination of both provides a large site with great diversity and a smaller less diverse development. The main driver for the two sites selected is to capture as many aspects of housing developments as possible to have the greatest breadth of potential learning that can be applied to all new developments across the whole of Greater Lincolnshire – including future developments that are not yet scheduled, confirmed, or granted planning consent. This is intended to provide Greater Lincolnshire with the necessary tools and institutional capacity for future actions without the same level of need for external assistance. This has necessarily required some optimisation, being restricted to two case studies.

Further rationale is provided below for the site selections:

Boston Toot Lane - 200 units
- Low sub-station availability
- The development consists of greater than 50 units built by 2025
- Obtained full planning permission

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- Construction has not yet commenced
- The area is representative of the average Lincolnshire housing price.
- The development is located in an area that can provide access to affordable housing

Beaver Street (Lincoln Western Growth Corridor) 3,200 units
- 4.679 MVA estimated demand, 5.2kW/unit
- Residential and commercial demand, challenges and constraints
- Planning consent granted
- Brownfield city site
- A Sustainable Urban Extension site, the findings/opportunities from the study could be replicated across GL, including at 7 SUEs in Central Lincs
- Outline planning permission awarded with start on site for phase 1 and infrastructure (spine road and new rail bridge) expected before 2025
- The largest site on the shortlist, 3200 homes
- An urban brownfield and greenfield site with a range of infrastructure challenges/opportunities.
- Utility strategy report available to provide energy requirement for the site
- Substation demand headroom 7.14 MVA and residential site will require 27MVA. Additional demand from surrounding commercial, residential and leisure developments threaten to stagnate development in this area in the medium/long term phases
- An agreed commitment between the 2 major landowners (City Council and Lindum) to deliver a commercially viable net zero carbon development.
- Large areas of land that is not suitable for housing has the potential for renewable energy generation/heat network

PILOT STUDY

The identified sites are deemed to be representative of Greater Lincolnshire's residential developments, with capacity to provide a pilot scheme to drive forward energy efficiency and resiliency across the region. A detailed feasibility study should be undertaken in conjunction with the relevant development stakeholders. This feasibility study should include consideration of:

- All properties to be installed with low carbon technologies including but not limited to:
  - Air source or ground source heat pumps (ASHP, GSHP)
  - Electric vehicle charge points
  - High level of energy efficiency in fabric performance
- Small scale energy generation across the sites to supplement the additional load driven by electrification of heat (ASHP, GSHP) and transport (EV)
- Detailed modelling of energy demand with the above included to understand implications of sub-station capacity and required infrastructure upgrades, if necessary
- Active network management including flexibility contracts to enable quicker connections without significant reinforcement. Consideration to be given to Enterprise ANM systems or similar, both DNO's are increasing ANM zones therefore these case studies could be test bed projects. This can enable customers to access network information to understand factors impacting connectivity.

6.2 INDUSTRIAL

RLB held engagement workshops with a range of commercial / industrial organisations across the region. The key outcomes are detailed below.

ABLE HUMBER PORT

Able Logistics Park has now changed to Able Energy Park (AEP), with Able Marine Energy Park being Able Humber Port (AHP). It is situated on the south bank of the Humber Estuary, which has been described as the Energy Estuary and in recent years it has been one of the UK's fastest growing port and logistics centres. AHP is potentially Europe's largest new port development as part of the growing marine renewable energy sector; this includes Able Energy Park[48] (AEP) providing an additional circa 1,000 acres of hinterland development to support a wide variety of port centric logistics functions.

The UK Government has identified AHP as a strategic location in the National Renewable Infrastructure Plan and HMG UK Treasury has confirmed AHP as the UK's largest Enterprise Zone, attracting 100% enhanced capital allowances.

Figure 13 Able Humber Port / Humber Region

ABLE ENERGY PARK

Able Energy Park (AEP) is located at the top of the proposed Humber Low Carbon Pipeline (as shown in Figure 6) close to the nearby Humber Ports.

The site has local sources of electricity, including power supplied from renewable sources, most notably the Hornsea offshore wind farms, with a potential of a new carbon capture pipeline adjacent to the site. AEP states; "the Energy Estuary is pursuing the option to deliver the UK's first zero carbon cluster and help position the North of England at the heart of the global energy revolution".[49]

AEP has a significant predicted demand with an investigative exercise being undertaken to determine if the local infrastructure can provide green supply from the substation or if there is an existing agreement to feed green energy back to the grid. There is an intent that green hydrogen will be produced; this is dependent on there being sufficient renewable energy supply. If hydrogen is not

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[48] www.ableuk.com/sites/port-sites/humber-port/able-logistics-park/
[49] Home - Zero Carbon Humber

generated using renewable energy then it is referred to as blue or grey which will not align with net zero aspirations, however it will provide energy supply to the region. Additionally, there are numerous solar proposals surrounding both sites, many of which are seeking battery storage sites.

At present, the quoted dates required will be at the earliest 2.5 years before demand kicks in, with AEP clients requiring energy from 2026 of circa 200MW with the remaining anticipated energy demand within the next 5 years. AEP has had planning permissions for a Bio-Ethanol Plant and Urea Manufacturing Facilities at present.

There are challenges not only for energy supply to the site, but water supply too on a clean, industrial scale. As Greater Lincolnshire moves towards attracting industry, it is likely that resource intensive industrial developments will require linked utility management supply and demand.

From the engagement with Able, there is potential for both significant energy demand and energy supply. However, until the developments progress further it is difficult to accurately predict either demand or supply. A key item from engagement is that Able have been in discussions with IDNO management companies for both energy and water supply rather than the DNOs (NGED and NPg).

BRITISH STEEL

British Steel's headquarters are in Scunthorpe, Lincolnshire employing the majority of their 4,000 employees within North Lincolnshire. There is a period of significant investment ahead, aligned to their overarching decarbonisation strategy; committing British Steel to deliver net zero steel by 2050 and significantly reduce CO_2 intensity by 2030 – 2035. This includes a £14.6million investment to enhance energy operations including projects to improve electricity and process gas usage. Due to soaring energy prices, the steel manufacturing industry has been hit hard.

The Scunthorpe manufacturing site imports 500M kWh of gas per year. The site has 2 CHP and a central power station to generate steam for the site which produces 19MW baseload, with 35MW generated internally. British Steel confirmed that grid connection is key to maintain the manufacturing plant, with a key risk being any issues with grid transmission connection. Relocation of the British Steel plant would need to be considered in respect of energy supply and energy cost, alongside their decarbonisation strategy. At present, they are reliant on market prices for low carbon energy. It is likely that hydrogen technologies will be adopted early for steel manufacturing, although at this stage it is unclear as to when hydrogen will form a significant proportion of manufacturing energy consumption.

Electrical requirements are anticipated to be 220MW electrical supply, which has been calculated to be the new upgraded supply requirements with a need to upgrade the connections. This will likely be a transmission connection via National Grid.

National Grid Electricity Transmission (NGET) and British Steel have held informal discussions for the last five years. National Grid engagement is intended to restart after further feasibility studies for equipment requirements and private wire network assessments.

In February 2023 British Steels owners, Jingye Group, announced the closure of the coking ovens at the Scunthorpe plant as coking coal will now be imported. Initially it was announced that the closure would result in the loss of 300 jobs, however it has now been made clear that those affected by the closure will be offered positions within the company.[50] Furthermore, British Steel faces an uncertain future with the need for them to become net zero in the near future. They are currently in discussion with the UK Government to adopt policies and frameworks to allow them to secure their future as a low-carbon company.[51]

6.3   HEALTH AND CARE

NHS Lincolnshire is responsible for the health services in Lincolnshire while the Northern Lincolnshire and Goole NHS Foundation Trust is responsible for health services in North Lincolnshire and North East Lincolnshire. The member organisations of NHS Lincolnshire consist of NHS Lincolnshire Integrated Care Board (ICS) (Formerly Clinical Commissioning Group), United Lincolnshire Hospitals NHS Trust (ULHT), Lincolnshire Community Health Services NHS Trust (LCHS) and Lincolnshire Partnership NHS Foundation Trust (LPFT). Through the ULHT, NHS Lincolnshire is responsible for the services in Lincoln County Hospital, Pilgrim Hospital, Boston and Grantham and District Hospital. Northern Lincolnshire and Goole NHS Foundation Trust is responsible for Scunthorpe General Hospital and Dian, Princess of Wales Hospital in Grimsby.
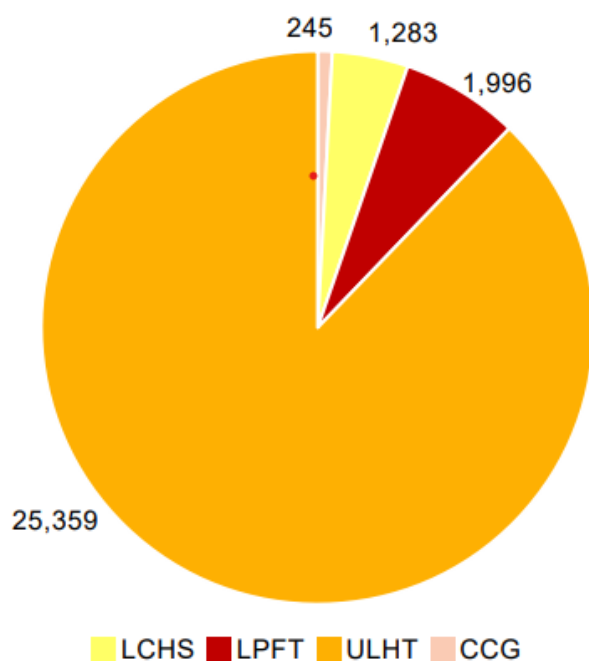
Figure 14: Building Energy Emissions from NHS Lincolnshire Member Organisations 2019 (tCO$_2$e) [1]

[50] Threatened Scunthorpe steel workers to be offered new jobs - BBC News
[51] Secretary of State visits British Steel as level playing field policy sought on energy and carbon costs - Business Live (business-live.co.uk)
Slide 1 (icb.nhs.uk)

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It is the hospital facilities that are responsible for the significant quantity of electricity consumption within the NHS.[52] All acute hospitals and many other NHS buildings are required to run continuously with rigorous backup energy strategies. For UHLT the aim is to reduce energy consumption by over 2,771,437 kWh per year to achieve the emissions reduction target of 14,802 tCO_2e in 2024/25 and to for the system to be net-zero by 2040. To achieve these goals, NHS Lincolnshire and Northern Lincolnshire and Goole NHS Foundation Trust are following the four-step approach set out within the NHS' 'Estates 'Net Zero' Carbon Delivery Plan'[53]:

1. Making every kWh count: Investing in no-regrets energy saving measures.

2. Preparing buildings for electricity-led heating: Upgrading building fabric.

3. Switching to non-fossil fuel heating: Investing in innovative new energy sources.

4. Increasing on-site renewables: Investing in on-site generation.

The immediate priority for the trusts is to introduce energy efficiency measures throughout their estates to avoid waste energy and reduce consumption. To move away from the use of fossil fuel as a heating source, the use of district heat networks is being explored in both existing and new building. Electrically powered heating systems, heat pumps, and infrared heating are other options available to the trusts, the decision which system to chose will depend on building surveys. To further decarbonise the system, on-site renewable energy systems, such as solar PV and battery storage will be implemented. As well as decarbonising, these systems will provide additional resilience to the estate in case of power outages and reduce the reliance on diesel generators.

In new capital projects, embodied carbon emissions are a concern that needs to be addressed. Both Trusts will look to explore options to reduce these emissions through collaboration with partners and their supply chain.

From our study it is clear that NHS Trusts in the region (and nationally) are exploring extensive on-site renewable energy systems, such as solar photovoltaics and integrated large battery storage technologies. This is intended to reduce the impact of switching to electricity and the associated costs, as well as providing additional resilience to power outages, with the potential to negate using back-up diesel generators. Additionally, District Heating Systems are being considered, which can be integrated with a wider set of beneficiaries beyond NHS Trusts to transform energy supply across urban areas of Greater Lincolnshire.

6.4 AGRI-FOOD

As part of the Greater Lincolnshire LEP Growth Strategy, agrifood/agriculture is a key sector for economic growth with an ambition to deliver sustainable, healthy food from land and sea by championing supply chain efficiency, the delivery of a Net Zero food chain and food which is naturally

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[52] ULHT-Green-Plan-Final-.pdf
[53] Estates-Net-Zero-Carbon-Delivery-Plan.pdf (jpaget.nhs.uk)

healthy. This is intended to reinforce the position as the UK Food Valley and an internationally competitive food cluster.

Greater Lincolnshire is responsible for growing 30% of the nation's vegetables and producing 18% of the poultry, with a total agricultural output of over £2bn in 2019, representing 12% of England's total production. In total the food chain provides 24% of jobs throughout Greater Lincolnshire (as compared with just 13% nationally) and 21% of its economic output (7% nationally). The future of the food chain is therefore absolutely vital to Lincolnshire and its population, with the region being strategically important to national food security.[54]

Greater Lincolnshire combines large-scale production, processing, cold storage and logistics capacities with cold chain and Food Industry 4.0 technologies[55] and expertise. The food supply chain accounts for circa 75,000 jobs within the region, therefore a significant sector for both employment and energy consumption. This sector is experiencing growth, with high levels of predicted investment. There are three key factors behind the sectors growth:

1. Brexit: increased costs to import food results in preference for local

2. Covid: global food supply chain impacted by disrupted labour supply

3. Low carbon supply chain: local food reduces carbon miles, reducing food wastage.

As part of the growth and investment in the agricultural sector, new facilities such as large-scale greenhouses will be required. This can be to the scale of 150 hectare greenhouse, which would consume 150 MW.

As the transport sector looks to decarbonise, this will result in increased demand for EV facilities and hydrogen fuelled transportation. This will therefore increase energy demand. This will not be a wholescale switch to EV, as it is deemed inefficient in larger trucks due to weight and recharge times; with EV preferred option for small vehicles and machinery.

As there is more Grade 1 agricultural land than in any other LEP area in England, the Greater Lincolnshire agri-food sector is anticipated to double its contribution to the economy by 2030 through an ambitious programme of investment in productive capacity. This increase in productive capacity will have an impact on energy requirements, as technology investment grows.

Circular economy is likely to be a large driver of growth across the region, as Greater Lincolnshire presents significant opportunities for investing businesses specialising in food waste recycling and the manufacture of recycled food packaging. This includes businesses such as Clean Tech (rPET manufacturing) and BioteCH4 (Anaerobic Digestion).

The strategy for the sector includes building an economic case for investment in the strategic transport infrastructure to support agri-food sector growth, with a particular focus on road freight. From engagement with the sector, there is a large data gathering exercise occurring to determine the

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[54] Agri-food Sector | Greater Lincolnshire LEP
[55] UK Food Valley | Greater Lincolnshire LEP

size of the challenge, which is covering red diesel through to off grid generation through AD, solar and wind. A current debate in the sector is whether to increase electrical connection capability or if the constraints that are present are prohibitive, with wait times of 10 years in some cases.

The agrifood industry has a range of challenges, notably energy costs. Unlike domestic energy bills, commercial energy costs are free to move with market prices. This has led to some production ceasing e.g. greenhouses fuelled by gas with heating costs spiking to levels up to 8 times the level seen in 2021.[56] More generally food chain companies have seen their electricity prices rise by 300-600%, particularly when tariffs fixed during the pandemic end. For example, a Lincolnshire farm has reported its energy bill rising from £164,000 to £636,000 per year for cold stores and grain storage. Many businesses report that at current energy prices their production is uneconomic and unless energy costs fall or food prices rise, production of food will reduce and many food chain businesses, especially SMEs, will close or cease production.

Cool chain or cold chain is a significant element of the agrifood energy demand and uses circa 11% of energy supply nationally. An established cold store cluster is located in Scunthorpe and an emerging cold store cluster situated in Grantham. Cool chain has numerous challenges at present, including workforce constraints, decarbonisation targets and supply chain resilience. There are significant cost pressures, considered to be an impact of Brexit, as imports have risen by circa 10%. To navigate, and mitigate the impacts investment in technology solutions is key – this will reduce energy consumption whilst improving data robustness.

Another major part of the agrifood sector in Lincolnshire is seafood. The UK is one of the top five EU aquaculture nations.[57] The Global Aquaculture Alliance (2019) has predicted that global aquaculture is likely to double from 47 million tonnes in 2006 to 94 million tonnes in 2030. Technological investment from industry and government is key to develop better management, reduce energy consumption and a sustainable fishing industry.

To progress this, it's clear to see that the region has pockets of research and development, including Grimsby's Food Refrigeration and Process Engineering Research Centre (FRPERC). There is significant capacity for cold storage in Grimsby. These and other regional centres of excellence partner with businesses in key areas including low carbon energy, sustainable refrigeration, digitalisation, automation, and intelligent transportation - to deliver improvements in sustainability, traceability and productivity.

A recommendation from this study is to integrate energy demand from the sector into Agricultural sectors strategy and collaborating on transport strategies where there is anticipated increase in EV demand.

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[56] https://committees.parliament.uk/writtenevidence/111840/pdf/
[57] Country fact sheets (europa.eu)

Alternative technologies for energy generation such as Energy from Waste and Biofuels could be of significant benefit to the region; reducing grid energy demands for producers and allowing income through exporting back to the grid.

6.5 PORTS AND LOGISTICS

Greater Lincolnshire is expected to experience projected population growth, alongside economic growth across key sectors. To facilitate this, transport infrastructure requires investment. This impacts energy in two ways:

- Switching to lower carbon transport resulting in increased demand for EV charge points, particularly for strategic transport hubs
- Economic growth particularly across low carbon energy generation / carbon capture which requires operations and maintenance, and across agriculture, chemicals, ports and logistics increasing transport demand and improvements. The economic growth results in increased energy requirements, and net zero aspirations changes this requirement to increased green energy requirements.

From analysis of Transport for the North and Local Authority transport strategies, it is clear that the move towards sustainability and enhancing active travel in urban areas are key for the next decade. Increasing the opportunities for sustainable modes of transport such as public transport, cycling and walking for commuting, leisure and recreation is intended to reduce private car demand.

For rail, 25% of UK rail freight passes through Greater Lincolnshire, presenting businesses with the opportunity to transport more goods by rail, which reduces carbon emissions by 75%. Midlands Connect has a Stronger, Greener, Fairer strategy[58] which encompasses:

- Fairer: levelling up and strengthening the region and the UK
- Greener: decarbonising transport and adapting to climate change
- Stronger: driving resilient economic growth

There are various initiatives driving investment into the three strategic areas. Greater Lincolnshire should feed into these collaboratively, utilising the ports and others significant industry to drive investment into modern transport systems. Initiatives of note include:

- Midlands Net Zero Hub to understand how hydrogen and other alternative fuels can be used to power the fleet of freight vehicles and HGVs within the Greater Lincolnshire Region.
- H2GVMids is a feasibility study on the transition to hydrogen powered HGVs. This has been developed by the Energy Research Accelerator (ERA) on behalf of the Department for Transport's Zero Emission Road Freight programme.[59]

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[58] Summary Document (Midlands Connect) Final
[59] H2GVMids - a feasbility study for hydrogen freight - ERA Energy Research Accelerator

- Establishing industry 'centres of excellence' where partners come together to share knowledge, collaborate and work together on new emerging technology areas or topics such as decarbonisation, freight and alternative fuels.
- Delivering a regional decarbonisation policy toolkit that will provide evidence to partners on the decarbonisation potential of various interventions and policies that could be used in their local sustainability plans.
- Creating a network resilience map to understand how transport, technology and energy generation interventions can work together to address climate change.

When considering road networks and private transportation, there are developments both current and scheduled for EV charging networks across the wider region. An example of this is the rapid charging fund (RCF), which is a £950 million fund to future-proof electrical capacity at motorway and major road service areas to prepare the network for 100% zero emissions vehicles (ZEV) uptake. A local case study is the LEVI scheme (Local EV Infrastructure) pilot – Lincolnshire County Council advised that as part of this successful bid 109 EV charging points will be installed across the Lincolnshire area, site locations are being reviewed, subject to approval. Locations have been selected primarily due to their proximity to areas highly reliant on on-street parking and with a lack of current charge point provision. The charge points themselves will include slow and fast charging. Lincolnshire County Council is the lead partner for the LEVI pilot, with circa £310,000 invested directly in the county.[60]

For large employers across Greater Lincolnshire, a large proportion of those researched have either installed, or intend to install EV charge points for their employees. An example of this is ULHT where a EV charging point project is being undertaken with a potential of fifteen charging points across the Trust being installed for staff and visitor use.

It is worth considering that the additional wider infrastructure for EV is likely to increase the attractiveness of private EV ownership, which can then result in additional demand both at a local residential unit level and across the wider infrastructure network. From discussions held with NPg, there is a predicted growth of EVs across the region they cover to total circa941,000 by 2028[61] while NGED have not yet released their EV Strategy which details future growth, this is expected in Summer 2023.

6.6   ENERGY

Greater Lincolnshire has significant ambitions in the energy sector - the acceleration of clean growth and the potential to be a global leader in the transition to net zero carbon emissions in line with the ambition of the Green Industrial Revolution presents a significant opportunity. In more rural parts of Greater Lincolnshire there remains huge potential to provide an innovation test bed for clean energy and whole system technologies.

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[60] Lincolnshire County Council, LEVI
[61] NPg Business Plan 2023 – 2028

This study has considered the below energy initiatives; these have the potential to significantly impact the energy landscape across Greater Lincolnshire over the next decade. A note of caution should be applied to predicted growth of energy industry where there is non-confirmed funding, planning or agreements in place.

It is clear to see that the region has the potential for huge growth due to the abundance of natural resources, location and proximity to energy developments, but is not maximising partnerships across the region to the fullest possible extent.

Greater Lincolnshire has multiple location advantages including tri-modal freight connectivity (road, rail and sea), whilst the Humber energy strategy and the agrifood sector impacts multiple areas of energy growth and opportunity, including the established Refuse Derived Fuel (RDF) feedstock supply chains, based on Immingham's status as a major port for RDF exports. The GLLEP has released a report on Low Carbon Investment Opportunity across the region, focusing on the Humber region as a key investment area for energy generation and carbon capture.

The wider Humber Energy Estuary's Offshore Renewables ecosystem includes the UK's only wind turbine blade manufacturing facility (Siemens), specialised logistics infrastructure and sector-focused skills providers. Whilst Offshore Renewable Energy hasn't been included as a key part of this study as it is above grid level, it is worth noting that it is a key pillar of Greater Lincolnshire's low carbon capability, presenting significant opportunities for expanding businesses across operation & maintenance, manufacturing, technology, and logistics supply chains.
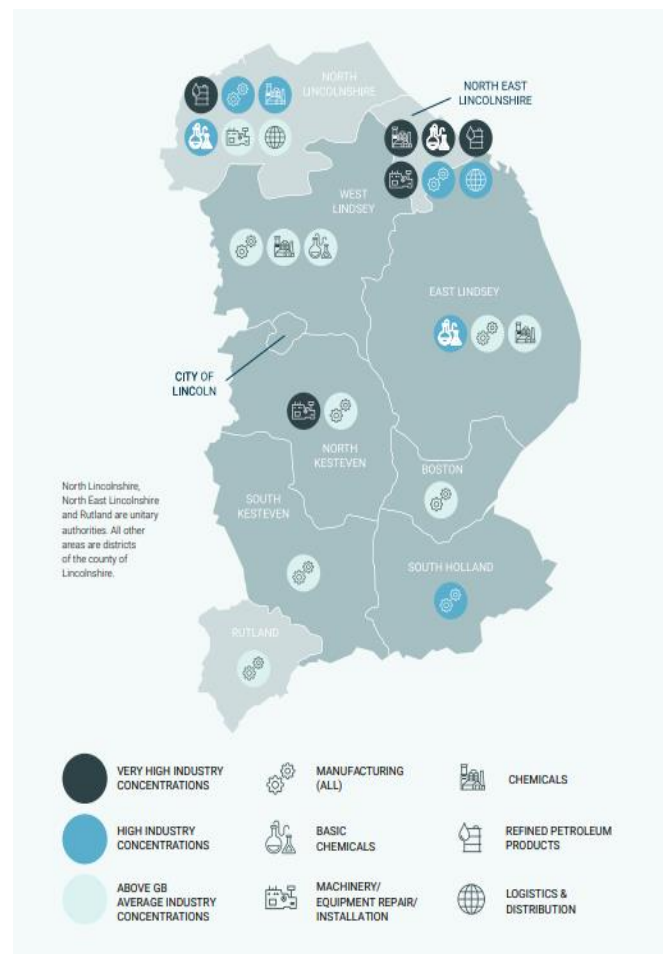
Figure 15 Greater Lincolnshire Industrial areas, GLLEP

Along with offshore wind, another key renewable energy source for the region is solar PV. Currently in the Greater Lincolnshire Area there are seventy-nine solar PV developments either in operation, under construction or have received planning permission to proceed with a generation capacity of 840.51MW.[62] In addition to these developments, there are nine solar PV Nationally Significant

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[62] Renewable Energy Planning Database: quarterly extract - GOV.UK (www.gov.uk)

Infrastructure Projects (NSIPs) proposed over the next seven years with a generation capacity of 4580MW[63] (See Appendix A).

In terms of hydrogen energy, The Gigastack,[64] the UK's flagship renewable hydrogen project, aims to demonstrate that renewable hydrogen is essential to achieving the UK's 2050 net-zero emissions target. By producing green hydrogen through electrolysis utilising renewable electricity generated by the Hornsea 2 offshore wind farm. Initially renewable hydrogen will be supplied to the Phillips 66 Humber Refinery, the project will also facilitate the wider industrial cluster's decarbonisation and '2040 Net Zero' target.

The GLLEP figure above demonstrates that the concentration of energy sector industry is focused in North and North East Lincolnshire.

EAST COAST CLUSTER

The East Coast Cluster (ECC) is a collaboration between Zero Carbon Humber, Net Zero Teesside and Northern Endurance Partnership.

The ECC is enabled by the Northern Endurance Partnership (NEP) comprising BP, Equinor, National Grid Ventures, Shell and Total Energies. Together the partnership will develop the infrastructure needed to transport CO_2 from across the Humber and Teesside to the Endurance Carbon Store, located 145km offshore in the Southern North Sea.

Survey works have commenced, which will inform engineering plans for pipelines connecting the onshore CO_2 transportation and storage network with the offshore Endurance Carbon Store. The ECC is intending to deliver the following which will impact Greater Lincolnshire:

- Decarbonise industry: potential to tackle almost 50% of the UK's total industrial cluster CO_2 emissions – *significant area of North Lincolnshire*
- Support levelling-up: creating and supporting an average of 25,000 jobs per year to 2050 and underpinning new low carbon industries in the north of England – *significant area of job creation in Greater Lincolnshire*
- Kick-start a hydrogen economy: supporting the creation of low-carbon hydrogen projects to deliver 70% of the UK's hydrogen target for 2030 – *job creation and energy generation across the region*

The work being conducted by each group in the East Coast Cluster can be tied together in The Humber Industrial Cluster Plan (HICP). This is an initiative by UK Research and Innovation (UKRI) that sets out a strategic roadmap for the East Coast Cluster to achieve net zero carbon emissions by 2040.[65] Figure 16 gives an overview of the projects and companies that are working together to achieve net zero in the Humber Cluster.

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[63] Renewable Energy Planning Database: quarterly extract - GOV.UK (www.gov.uk)
[64] Gigastack - Demonstrating renewable hydrogen for a net zero future
[65] Humber Industrial Cluster Plan – UKRI
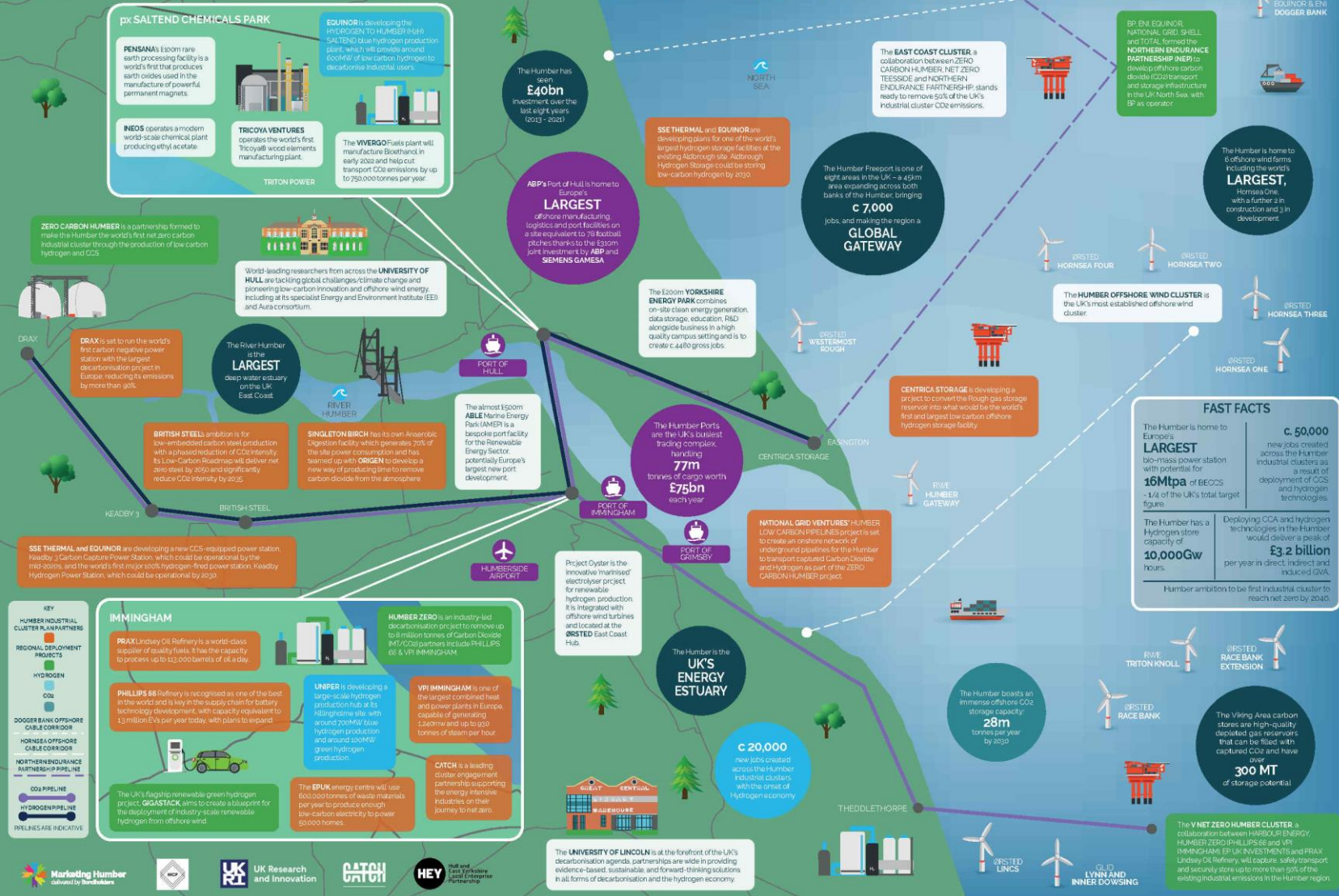
Figure 16 The Humber Industrial Cluster Plan[66]

ZERO CARBON HUMBER

Zero Carbon Humber is a collection of international energy producers, major regional industries, leading infrastructure and logistics operators, global engineering firms and academic institutions. The group are working to deliver low carbon hydrogen production facilities and essential carbon capture usage and storage (CCUS), together with region-wide infrastructure that will enable large-scale decarbonisation across the country's most carbon intensive region.

Hydrogen to Humber (H2H) Saltend is intended to be the world's largest hydrogen production plant with carbon capture at Saltend Chemical Park. It will be the starting point for a CO_2 and hydrogen pipeline network developed by National Grid Ventures, connecting energy-intensive industrial sites throughout the region, offering businesses options to directly capture emissions or fuel switch to hydrogen. All captured CO_2 will be compressed at Centrica Storage's Easington site and stored under the southern North Sea using offshore infrastructure shared with the East Coast Cluster. It is expected that this will be available to organisations in Greater Lincolnshire.

Hydrogen production requires significant energy supply to produce either blue or green hydrogen – the wider benefits of energy supply and economic generation will be particularly relevant to this study.

CARBON CAPTURE AND STORAGE (CCS)

CCS is the process of capturing CO_2 emissions from industrial activity such as steel and cement production, transporting it, and then locking it into underground storage sites. CCS has the potential to capture over 90% of the CO_2 emissions produced from the use of fossil fuels in electricity generation and industrial processes, preventing the CO_2 from entering the atmosphere. The CCS chain consists of three parts; capturing the CO_2, transporting the CO_2, and securely storing the CO_2 emissions underground, in depleted oil and gas fields or deep saline aquifer formations.

Figure 17 Viking Carbon Capture and Storage

The government hopes to store 20-30m tonnes of CO_2 a year by 2030, equal to the emissions from 10-15m cars. The UK Governments March 2023 budget commits to investing £20 million to scale-up CCS projects across the UK. The new funding will be rolled out over a period of twenty years and will support the development of CCS initiatives. Across the UK, CCS projects have been developed which have been awaiting government approval. These include the Acorn CCS project designed to support the decarbonisation of two St Fergus

gas terminals in Aberdeenshire, and Viking CCS, a 34-mile pipeline that will take carbon from industrial sites on Humberside and lock it under the North Sea.[66]

The UK's largest industrial cluster, the Humber, is responsible for producing 12.4 million tonnes of CO_2 emissions per year. It's home to a high concentration of fossil-fuel power stations and large industrial plants that release millions of tonnes of CO_2 every year. This makes it an ideal and important location for clean growth projects using CCS and hydrogen. The Humber Low Carbon Pipelines project is a significant part of the Zero Carbon Humber vision, to become the UK's first net zero carbon cluster by 2040. The project aims to deliver new onshore pipeline infrastructure to transport the captured carbon emissions from the regions industrial emitters for safe storage in the North Sea, and enable industries to fuel-switch from fossil fuels to low-carbon hydrogen. Humber Low Carbon Pipelines intends to support the UK to transition to a low-carbon economy and reach its ambitious net zero targets by 2050.

In North Lincolnshire, Keadby Carbon Capture Power Station has been proposed as a 910MW power station fitted with carbon capture technology to remove CO_2 from its emissions. Keadby 3 will connect to the shared infrastructure being developed by the East Coast Cluster to transport the captured CO_2 and store it safely offshore. The installation of CCS into a power station utilises a significant amount of energy to run therefore has the potential to significantly reduce the efficiency of the power station.

Whilst CCS does not generate energy, it is a key part of this study as it will enable decarbonisation of energy across the region which has been a theme throughout all stakeholder engagement. It is likely that CCS will be required to decarbonise the energy consumed by heavy industry such as steel within the region, where demand is consistently high and renewables will not provide sufficient supply and continuity in the short term. It is likely that CCS projects will benefit from the March 2023 budget and should be considered within the Greater Lincolnshire energy landscape as a step to achieve the ambitious decarbonisation goals across the region.

ELECTRICITY INTERCONNECTORS

Electricity interconnectors are a way of connecting the electrical systems of two countries together to trade and share surplus electricity. They allow for a more competition in the market for costs, a more secure electrical system and a reliable source of electricity. Electricity interconnectors can run on land via overhead cabling, under the sea or underground. In the UK there are five interconnectors, linking the UK with France, Belgium, Norway and the Netherlands. Interconnectors are also important in the transition of the national electrical system away from fossil fuels generation to renewable energy sources, this is the case with the latest interconnector project, the Viking Link. This interconnector will link the British and Danish transmission systems and is due to be completed at the end of 2023.[67] The link will supply 100% renewable energy generated in Denmark. The link is a two-way system, as

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[66] Consultation - Viking CCS
[67] Viking Link Interconnector (viking-link.com)

well as importing electricity from Denmark, it can also be exported. This means that any excess renewable energy generated in the UK will not go to waste.

From a Greater Lincolnshire perspective, the link lands on the coast and will be connected to the UK national grid at Bicker Fen substation, where work is progressing on the new convertor station. The link allows for security in the local grid, supporting the region to meet its renewable energy targets and should reduce the electricity bills for customers in the region.

7.0 FUTURE DEMAND ANALYSIS

This analysis was carried out to assist in meeting the key lines of enquiry of the report. The aim is this analysis was to Identify any significant barriers and/or opportunities relating to the underlying energy provision infrastructure within Greater Lincolnshire area. An analysis of the information gathered provides a picture of the energy demand and availability in the Greater Lincolnshire regions over the next twenty years.

The intent behind the GIS mapping exercise is to enable the ability to develop key/targeted decisions based on the need to secure significant inward investment, where this is needed from National Grid/DNOs based on what we know as the region's growth areas.

Methodology

Data Gathering: A large quantity of data on the future developments was obtained from the seven district and two unitary authorities in the Greater Lincolnshire area. The data collected was via documents submitted from the seven districts, two unitary authorities and additional investigation by the RLB team. Circa 250 documents were gathered in the data analysis phase. Alongside document analysis, additional research and engagement via email and virtual meetings was undertaken in search of further information that was not contained in the submitted documents.

The bulk of the information was gathered from the Local Plans, which have been adopted by the various councils and each district into each council. The local plans contained planning data on residential, commercial, and industrial developments. There was also information on projected future energy demand. Based on this information, further research was carried out by the RLB team to obtain details on the developments in the plans and other relevant developments. Further consultation was sought with each district on any developments relevant to the project.

There were consultations with third party stakeholders that were considered large energy users in the council areas about upcoming projects, and existing asset future energy use. This type of data was not available to the districts councils and required a direct approach.

Data Input: The data was compiled into a spreadsheet where each district was divided into separate tabs. To determine the connected load of each development, the BSRIA General Rules of Thumb and industry standards load assumptions were used. An example if this is for the residential units, where an assumption of 4.5kVA maximum demand per general domestic unit has been used in this study. This assumption is based on the load estimation values in the *BSRIA Rules of Thumb guidelines for building services*. To take into consideration the move towards a low carbon economy the figure was revised upwards to 7.2kVA per unit. This is to account for the use of increased electrical demand with low carbon heating technologies such as air source heat pumps and the use of domestic charge points for electric vehicles. A list of the other assumptions can be found in the spreadsheet.

When a development was entered into the spreadsheet, it was allocated a classified based on its use, e.g., residential or office space. By doing this an electrical load assumption was applied to the development. A diversity factor was added to each development to calculate the After demand

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maximum demand (ADMD) figure that is used in the design of electricity distribution networks. The diversity factor was based on consultation with both Northern Powergrid and National Grid:ED. This ADMD value was adjusted to include for the use of electrical vehicle charge points in domestic housing.

To allow for time sequencing, each development was grouped in terms of priority based on the below classification:

Priority number	Justification
1	High priority – GLA Development with live requirement - 1 - 3 years
2	High priority - confirmed 3rd party demand, GLA sites requiring future proofing, 4 - 10 Years
3	Consented development - status unknown, unconsented but highly likely to come forward, 11+ years
4	Potential future generation

Three separate priority levels are used in this study. Each priority level has a different time frame, this allows for the separation of the future developments into specific categories. By grouping the developments in this way this provides stakeholders within the region insight on how to proceed. Developments that are in Priority 1 require immediate attention as they will require connection to the grid the soonest. Those in Priority 2 will require planning. Consultations can take place with the DNOs to determine the availability of substation headroom. Investment can take place to ensure that there will be adequate electrical infrastructure available to meet the demands of future developments. Priority 3 allows for long-term planning.

Data Analysis: This data was analysed for information relating to energy demand from future developments. The connected load for each development was allocated by district and then broken down further into location. Each development was assigned to a primary substation based on the area data of the two Distribution Network Operators (DNOs). Once this was carried out it allowed for a total demand value to be determined for each primary substation.

Concurrently, data was gathered from the two DNOs, Northern PowerGrid and National Grid ED on the Demand Headroom availability for each primary substation in the Greater Lincolnshire area. The Demand Headroom of a primary substation is the gap between its rating and the actual demand being placed upon it, essentially the spare capacity of the substation. The connected load data for the developments and the headroom availability of the primary substations were overlayed on top of each other to determine the amount of demand headroom that would be available in each primary substation with the introduction of the future developments. The information for the DNOs can be found here;

▪ Northern PowerGrid demand availability: Demand Availability Map | Northern Powergrid
▪ National Grid: Energy Distribution network capacity: National Grid - Network Capacity Map Application

Limitations:

Whilst every effort was made to collect data from all the relevant stakeholders, they were certain organisations that did not respond to enquiries from the project team. To allow for this certain load assumptions were made.

One aspect that has been identified as an important factor on future demand headroom availability in the primary substations is supply capacity. This study focused on the demand capacity of the primary substations. Supply capacity has been identified as an issue by the DNOs. This is an issue that they are aware of, and they are working on options to resolve it. Supply capacity restriction is an issue for the Greater Lincolnshire area as it limits the amount of electricity that can be imported back into the grid through local substations. This is particularly relevant to renewable energy systems, such as wind and solar. New renewable energy developments in the area face long wait time to secure a supply connection to the DNOs infrastructure. This can have an impact on the area achieving low carbon targets as well as low carbon investment and business growth.

Further discussion is required with the two DNOs in the area to establish the extent of the issue and to discuss options for moving forward and resolving the issues. To establish how much the substations in the Greater Lincolnshire area are affected, further analysis would need to be conducted where the focus is on supply headroom availability.

Mapping

To provide a visual representation of the data, Microsoft Power BI was used to create a GIS map with a red, amber, green representation that allowed the client a clear visual of where there will be a shortage of demand in the future. A substation is classified as Red if the demand headroom is equal to or less than 0 MVA, Amber if the value is greater than zero and less than 2.5 MVA and Green if the value is equal to or greater than 2.5 MVA. By using this application, it allows for greater interaction between the user and data. The two figures below give demonstrate the visuals that are being used in the application.
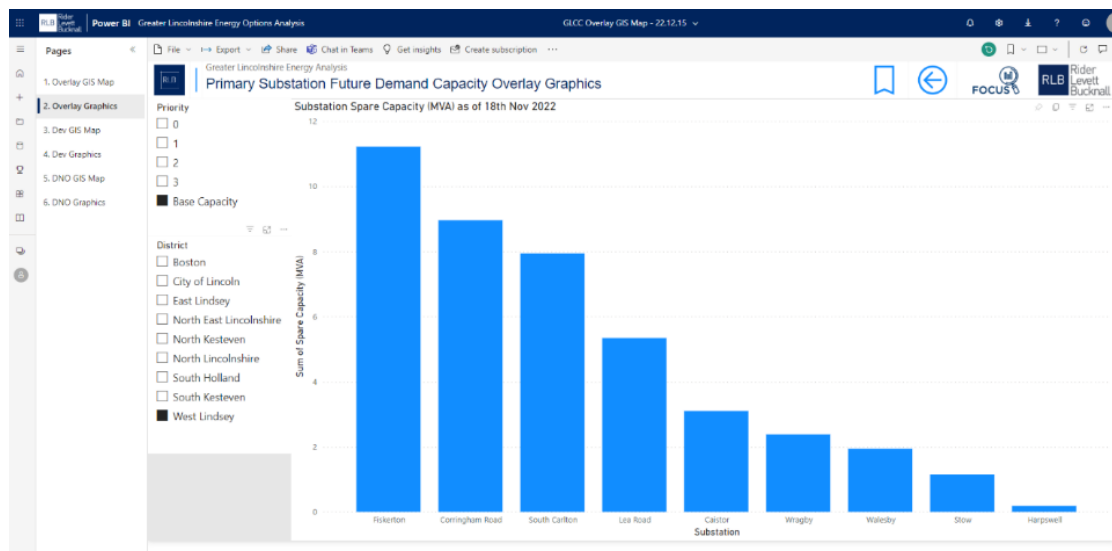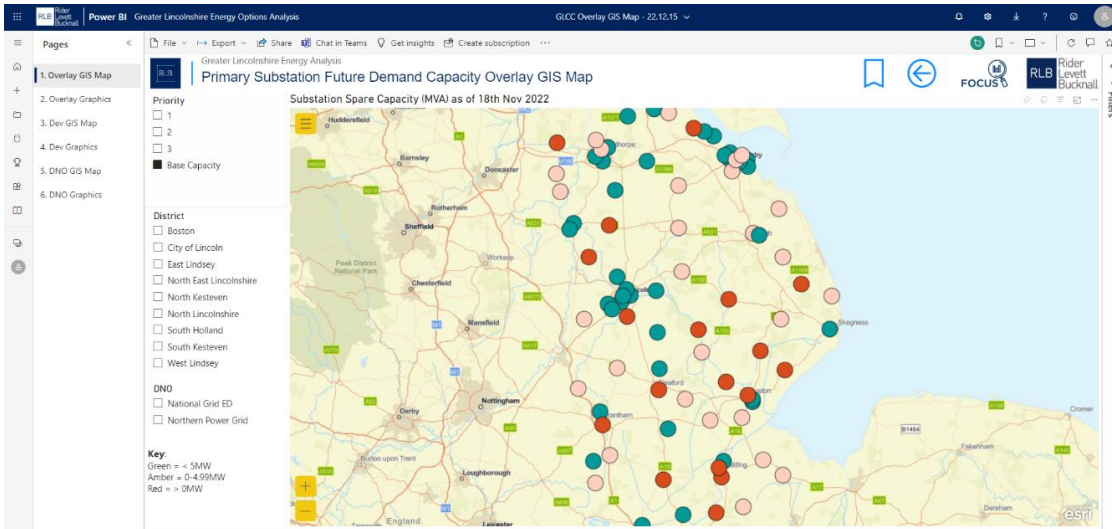
Figure 18 Future Demand Capacity

Each primary substation was mapped showing the demand headroom availability for each over a twenty-year period, split using the three priority options, with 'Base Capacity' being the current value of demand headroom. To allow for accuracy demand headroom values for each primary substation is linked to the DNOs live values. The map can be filtered to a specific priority, district, or DNO.

7.1 ANALYSIS OF THE AREAS OF SHORTFALL

An analysis of the information gathered provides a picture of the energy demand and availability in the Greater Lincolnshire region over the next twenty years.

Regional Analysis

Within the nine council areas of the Greater Lincolnshire Area there are one hundred primary substations that distribute electricity from the national grid to local developments. From our analysis

we have concluded that there will be a significant constraint on demand headroom in these primary substations over a twenty year period. Without investment in infrastructure or the introduction of innovative measures to rectify these constraints, there will be difficulty in the supply of electricity to future developments.

Table 5: Number of Primary substation demand headroom RAG for the Greater Lincolnshire Area.

	Baseline	Priority 1 (1-3 Years)	Priority 2 (4-10 Years)	Priority 3 (11+ Years)
Red	15	40	66	77
Orange	20	20	13	9
Green	65	40	21	14

Table 5 gives an indication of the movement of demand headroom of each primary substation in the region. At this moment in time, the substations that are classified as red account for 15% of the total. This moves to 40% in the first three-year period and further moves to 77% by the end of the time frame for the analysis. On a regional level, over the first 3 years of the analysis, the north of the region, North Lincolnshire and North East Lincolnshire, see the highest constraints on demand headroom. As the time frame moves forward, the south and west of the region begin to experience significant constraints. Boston and West Lindsey experience 100% negative demand headroom during the second period of the analysis. How this breaks down into each area is discussed in the following section.

Table 6 Number of Primary substation Demand headroom RAG by District

		North Lincolnshire	North East Lincolnshire	City of Lincoln	North Kesteven	West Lindsey	East Lindsey	Boston	South Holland	South Kesteven
Baseline	Red	3	0	0	4	0	2	1	3	2
	Amber	3	1	0	2	4	4	2	1	3
	Green	13	11	6	6	4	10	3	4	8
Priority 1 (1-3 Years)	Red	5	5	3	6	5	4	2	5	6
	Amber	5	0	0	3	1	5	2	2	2
	Green	9	7	3	3	2	7	2	1	5
Priority 2 (4-10 Years)	Red	12	6	4	8	8	11	6	6	7
	Amber	1	1	1	3	0	2	0	1	3
	Green	6	5	1	1	0	3	0	1	3

		North Lincolnshire	North East Lincolnshire	City of Lincoln	North Kesteven	West Lindsey	East Lindsey	Boston	South Holland	South Kesteven
Priority 3 (11+ Years)	**Red**	13	7	5	10	8	13	6	7	9
	Amber	2	1	0	1	0	1	0	0	2
	Green	4	4	1	1	0	2	0	1	2

Distribution Network Operators

For the DNOs, of the one hundred primary substations active across the region NPg are responsible for forty-three of the primary substations in the region while NGED are responsible for fifty-seven. At baseline NPg have 72% in green classification while NGED have 60%. In the short-term NPg will see 35% of their primary substations with negative demand headroom, while NGED will have 44%. For NPg this will increase to 63% in the medium-term and 70% in the long-term. NGED will have 68% with negative demand headroom in the medium-term and 82% in the long-term.

Table 7 District network operators primary substation demand headroom RAG connected load

	Baseline			Priority 1 (1-3 Years)			Priority 2 (4-10 Years)			Priority 3 (11+ Years)		
	Red	Amber	Green	Red	Amber	Green	Red	Amber	Green	Red	Amber	Green
Northern Powergrid	7%	21%	72%	35%	19%	47%	63%	7%	30%	70%	9%	21%
National Grid ED	21%	19%	60%	44%	21%	35%	68%	18%	14%	82%	9%	9%

Council Area Analysis

Boston

Currently the primary substations in the district are in reasonable health with one of the six having negative demand headroom capacity. In the district, residential will account for the majority of demand headroom, at 64%. The majority of this is planned to be in the town of Boston, with two Sustainable Urban Extensions planned for the west and north of the city. The town of Boston also dominates the share of employment and office land in use, with a major development planned for The Quadrant and a redevelopment of the port area. Residential developments are also planned for the villages of Kirton, Sutterton, Swineshead and Fishtoft. By the end of the study, all of the district's six primary substations will have negative demand headroom availability, however only one has major constraints, Sleaford Road, Boston.

Table 8 Primary substation constraint - Boston

Substation	Demand Headroom Availability (MVA)			
	Baseline	Priority 1 (1-3 Years)	Priority 2 (4-10 Years)	Priority 3 (11+ Years)
Kirton	4.39	3.14	1.49	-3.64
Langrick	1.33	0.77	-0.73	-7.40
Marsh Lane	9.76	6.56	-0.70	-9.95
Mount Bridge, Boston	9.68	7.91	3.93	0.30
Sleaford Road, Boston	0.00	-1.40	-4.80	-15.97
Wrangle	0.38	0.37	-0.15	-0.43

City of Lincoln

Currently the primary substations in the district are in good health with all having positive demand headroom capacity. Residential developments plan to be the dominate source of electrical use over the course of the study. There are a large number of residential developments planned for the future with the Sustainable Urban Extension, Lincoln Western Growth Corridor, being the largest. There is a number of employment and light industrial developments planned in the east of the city beside the River Witham along with the expansion of existing companies such as Wyman Gordon and Bifrangi. The city will also benefit from planned expansion of the two universities located there as well as the NHS Trust situated in the city. The planned developments place constraints on the primary substations in the district with five of the six in negative demand headroom by the end of the study.

Table 9 Primary substation constraint - City of Lincoln

Substation	Demand Headroom Availability (MVA)			
	Baseline	Priority 1 (1-3 Years)	Priority 2 (4-10 Years)	Priority 3 (11+ Years)
Anderson Lane	5.70	4.88	0.25	-3.02
Beevor Street	5.95	-0.66	-4.92	-7.23
Doddington Park	11.60	-1.51	-11.21	-33.66
Lincoln No 2	7.14	-0.04	-25.03	-65.64
Rookery Lane	16.25	5.83	-1.58	-3.52
Ruston and Hornsby	5.70	15.12	15.07	14.96

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East Lindsey

Currently the primary substations in the district are in reasonable health with two of the sixteen having negative demand headroom capacity. The majority of future electrical demand in the district is planned to be residential use, 44%. Developments in Louth and Skegness will account for the largest growth, with the Skegness Gateway Project being a major development. There is also planned residential growth in the smaller towns in the district, with Horton-le-Clay, Horncastle, Spilsby, Stickney and Tetney all marked for planned residential growth. With the districts proximity to the coastline there is growth in the tourism sector and a planned increase in the provision of Static Caravans as holiday homes. This district is expected an increase in the agri-food sector with an increase in commercial greenhouse provision. By the end of the study thirteen of the district's sixteen primary substations will have negative demand headroom availability.

Table 10 Primary substation constraint - East Lindsey

Substation	Demand Headroom Availability (MVA)			
	Baseline	Priority 1 (1-3 Years)	Priority 2 (4-10 Years)	Priority 3 (11+ Years)
Alford	1.22	0.66	-0.57	-1.77
Belmont Covert	4.38	4.35	4.24	4.13
Chapel St Leonards	3.16	2.72	-4.09	-4.26
Grainthorpe	2.30	2.10	1.58	1.12
Horncastle	0.00	-1.03	-11.91	-17.55
Ingoldmells	5.79	5.47	4.39	4.18
Keddington Road	5.21	2.60	-0.50	-8.08
Louth	3.13	-1.64	-12.97	-14.52
North Thoresby	3.79	1.71	-0.67	-5.01
South Reston	4.25	3.59	2.92	-0.25
Spilsby	3.75	3.40	-0.33	-9.77
Stickney	0.00	-2.65	-3.70	-9.22
Trusthorpe	4.98	1.11	0.38	-0.23
Warth Lane	14.57	3.00	-14.83	-38.02
Woodhall Spa	0.61	-0.41	-2.15	-5.57
Wragby	1.22	1.06	-0.91	-4.72

North East Lincolnshire

Currently the primary substations in the area are in good health with all having positive demand headroom capacity. Over the time frame of the study, employment is planned to be the largest requirement of electricity in this area, accounting for 47% of the total demand. As with North Lincolnshire, there is significant demand in the Killingholme and Immingham areas from industrial and employment use. The primary substations in this region show significant constraint as the timeframe

move forwards and more developments come online. In the urban areas of Grimsby and Cleethorpes there is significant redevelopment of the city centre planned as well as new residential developments to the west. Despite these, the primary substations in the Grimsby and Cleethorpes vicinity remain healthy for the duration of the study.

Table 11 Primary substation constraint – North East Lincolnshire

Substation	Demand Headroom Availability (MVA)			
	Baseline	Priority 1 (1-3 Years)	Priority 2 (4-10 Years)	Priority 3 (11+ Years)
Binbrook	5.65	5.57	5.23	4.46
BTP	5.43	5.43	5.43	5.43
Convamore Road	9.69	8.66	5.93	1.99
Conyard Road	14.30	12.45	8.58	3.98
Doughty Road	3.40	-5.42	-8.31	-21.04
Great Coates	4.99	-8.55	-70.83	-192.41
Grimsby Docks	20.75	20.26	16.77	11.38
Marsden Road	1.49	-5.65	-6.76	-9.28
Queens Road	15.57	-69.77	-313.63	-617.38
Scartho	3.41	-2.29	-13.82	-37.72
Wesley Crescent	9.84	5.08	-2.53	-13.00
Yarborough Road	9.64	8.03	2.20	-9.00

North Kesteven

Currently the situation with the primary substations in the district is downbeat with four having negative demand headroom capacity. There is mix of residential, office and employment use planned for the district that place equal demand on electrical infrastructure. The district's close proximity to the City of Lincoln increases the demand for housing in the district, there are also two Sustainable Urban Extensions planned for the Sleaford area that will increase demand. By the end of the study the districts will see eight primary substations with negative demand headroom availability, while two further substations, Cranwell and RAF Cranwell, are lacking data to make an analysis.

Table 12 Primary substation constraint – North Kesteven

Substation	Demand Headroom Availability (MVA)			
	Baseline	Priority 1 (1-3 Years)	Priority 2 (4-10 Years)	Priority 3 (11+ Years)
Billingborough	6.00	5.88	5.68	5.38
Cranwell	0.00	0.00	0.00	0.00
Great Hale	1.56	0.38	-0.31	-1.77
Leadenham	2.09	0.95	0.03	-2.04
Metheringham	6.59	2.88	0.71	-1.12

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	Demand Headroom Availability (MVA)			
Substation	Baseline	Priority 1 (1-3 Years)	Priority 2 (4-10 Years)	Priority 3 (11+ Years)
North Hykeham	5.18	-21.06	-93.78	-171.31
RAF Cranwell	0.00	0.00	0.00	0.00
Ruskington	5.34	3.88	0.95	0.09
Sleaford	0.00	-22.61	-45.57	-61.39
Swinderby	4.80	-2.50	-7.14	-7.65
Tattershall	3.50	2.17	-2.77	-6.34
Waddington	0.00	-8.93	-15.06	-17.94

North Lincolnshire

91% of the future electricity demand for North Lincolnshire will be required by employment and heavy industry usage. In the town of Scunthorpe, the future of British Steel is still to be determined as it transitions to a net-zero operation. This transition will require a significant increase in electrical use which will put strain on the primary substation in the immediate vicinity, especially Station Road Substation. To the west of Scunthorpe, the Lincolnshire Lakes development will also place a demand for electricity in the area. In the east of the area, the industrial heartland in the vicinity of Killingholme and Immingham, with the ABLE Humber Port and ABLE Energy Park being major developments in the area. Initially these developments will place increase demand pressures on the primary substations in the area. However, it is planned that once the generational capacity of the developments come online this pressure will decrease. As the time frame increase there is significant constraint on the primary substations in the area to meet the demand in increased industrial capacity being introduced. This area sees the most significant constraints on demand headroom of the region.

Table 13 Primary substation constraint – North Lincolnshire

	Demand Headroom Availability (MVA)			
Substation	Baseline	Priority 1 (1-3 Years)	Priority 2 (4-10 Years)	Priority 3 (11+ Years)
Barrow	4.33	0.92	-10.59	-22.22
Billet Lane	8.61	8.07	6.52	6.52
Bottesford	10.57	9.61	6.44	-14.56
Bridges Road	8.37	8.14	7.45	7.45
Caistor	3.10	1.96	-0.48	-1.88
Clough Lane	-0.98	-1.19	-109.15	-1079.89
Crowle	-0.95	-1.67	-6.30	-7.52
Eastfield Road	0.47	-17.97	-47.71	-86.61
Epworth	1.94	1.50	-15.92	-33.34
Firth Brown	11.93	11.27	10.73	10.25

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Substation	Demand Headroom Availability (MVA)			
	Baseline	Priority 1 (1-3 Years)	Priority 2 (4-10 Years)	Priority 3 (11+ Years)
Flixborough	-2.39	-11.04	-30.07	-45.97
Foxhills	2.16	2.02	-14.54	-29.13
Haxey	2.66	1.72	0.84	0.06
Hibaldstow	5.54	3.72	-1.54	-5.43
Humber Road	11.81	11.65	-338.35	-338.35
Pasture Road South	10.37	9.17	5.41	0.91
South Ferriby	5.75	5.53	4.39	3.27
Station Road	3.67	-2.77	-307.06	-321.88
Wrawby	10.90	9.76	-1.23	-8.13

South Holland

Currently, the outlook for the primary substations in the district is mixed with three having negative demand headroom capacity. Employment use is planned to be the largest requirement for electrical demand in the future, 53%. Residential use will be second with 31%. The South Lincolnshire Food Enterprise Zone at Holbeach is a major employment development that will require a large electrical demand. Spalding is the other area that is the focus for future planned employment development. Spalding and Holbeach are the two centres that dominated the residential use, with Holland Park development in Spalding and the Peppermint Park Project in Holbeach being the largest developments planned. This district is at the heart of the UK Food Valley and is also expected to see an increase in the use of land for the agri-food sector, particularly cold storage and transport. By the end of the study seven of the district's eight primary substations will have negative demand headroom availability with Spalding experiencing the most significant constraints.

Table 14 Primary substation constraint - South Holland

Substation	Demand Headroom Availability (MVA)			
	Baseline	Priority 1 (1-3 Years)	Priority 2 (4-10 Years)	Priority 3 (11+ Years)
Crowland	0.00	-3.03	-7.36	-15.04
Donington	3.22	0.40	-5.33	-11.87
Holbeach	2.40	-5.87	-18.20	-32.92
Long Sutton	4.14	-11.44	-34.90	-71.32
Spalding Clay Lake	0.00	-3.61	-10.75	-20.66
Spalding Park Road	0.00	-4.93	-18.74	-45.61
Wardentree Park	8.99	4.35	3.14	-1.78
Whaplode Drove	2.68	2.34	1.57	1.37

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South Kesteven

Currently the primary substations in the district are in reasonable health with two of the thirteen having negative demand headroom capacity. It is planned that residential,46%, and employment, 42%, will account for the majority of future electrical demand in the district. Grantham and Stamford areas see the largest planned residential developments, with three major developments planned for Grantham, Southern Quadrant, Rectory Farm, Prince William of Gloucester and Prince William Barracks. The employment developments are spread across the district, with the most significant one planned for Gonerby Moor. The region has carried out a survey to identify land that is suitable for future office and employment use, this has given the district a clear picture of the future demand objectives. Part of the district falls within the UK Food Valley and will benefit from growth in this sector. By the end of the study nine of the district's thirteen primary substations will have negative demand headroom availability with those in Grantham experiencing the most significant constraints.

Table 15 Primary substation constraint – South Kesteven

Substation	Demand Headroom Availability (MVA)			
	Baseline	Priority 1 (1-3 Years)	Priority 2 (4-10 Years)	Priority 3 (11+ Years)
Bourne	0.00	-0.95	-9.36	-13.33
Dowsby Fen	1.77	1.77	1.77	1.77
Easton	3.26	-1.16	-1.67	-5.85
Grantham North	24.80	22.42	14.22	-9.17
Grantham South	0.00	-3.93	-11.39	-40.41
Market Deeping	10.21	6.05	-4.44	-21.85
Market Overton	1.69	1.22	1.08	0.28
New Beacon Road, Grantham	8.94	-11.99	-37.18	-70.55
Skillington	10.18	10.18	9.56	9.39
Stamford	6.68	-0.49	-14.65	-29.15
Tunnel Bank, Bourne	13.60	11.08	7.84	6.50
West Deeping	0.86	-1.32	-2.02	-2.33
Westborough	4.69	4.32	0.84	-3.27

West Lindsey

Currently the primary substations in the district are in good health with all having positive demand headroom capacity. Future electrical demand in this district is split between residential and employment use. The district's proximity to the City of Lincoln increases the number of residential units planned for development as overspill from the city is expected. There are also two Sustainable Urban Extensions planned for the Gainsborough area that contributed to the residential use planned for the town. Employment land is mainly focused in the Gainsborough area, with the Hemswell Cliff Business Park requiring significant demand. Part of the district falls within the UK Food Valley, the

agri-food sector is expected to grow and this will affect the district through an increase in planned industrial greenhouses. An allowance has been allowed for expansion in this sector, however the exact demand of this in the future is an unknown quantity. By the end of the study all of the district's primary substations will have negative demand headroom availability, this is the only district in the region that this occurs.

Table 16 Primary substation constraint – West Lindsey

Substation	Demand Headroom Availability (MVA)			
	Baseline	Priority 1 (1-3 Years)	Priority 2 (4-10 Years)	Priority 3 (11+ Years)
Corringham Road	8.96	5.24	-8.86	-24.73
Fiskerton	11.22	-0.16	-37.70	-62.65
Harpswell	0.18	-5.54	-22.37	-23.28
Lea Road	5.34	-7.83	-24.94	-32.63
Normanby	1.71	1.25	-4.08	-5.25
South Carlton	7.94	3.34	-28.29	-33.23
Stow	1.15	-0.08	-4.75	-5.89
Walesby	1.94	-1.25	-9.49	-11.33

Shortfall Solutions

From the analysis carried out during this study a number of areas have been identified that require attention due to demand headroom restrictions. Resolving these restrictions required discussion with the relevant DNO to identify the reason for these restrictions and the most beneficial solution(s). In section 4.0 of this report, alternative solutions have been identified that can provide solutions for the Greater Lincolnshire area. Each council area is different, with different demands, needs and goals.

It is because of this that a recommendation of this report would be that to best identify the most suitable solution to the primary substation demand headroom restrictions, a feasibility study should be carried out for each area identified as a priority 1 shortfall. This feasibility study would need to be carried out with the relevant Local Plan for that particular area and in conjunction with the net zero strategy.

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8.0 KEY LINES OF ENQUIRY

Both nationally and across Greater Lincolnshire, the energy landscape is undergoing a period of change; from increasing development across regions, transitioning to net zero with the subsequent increases of low carbon technologies, putting further demand on the network for connections. Ofgem notes that there are three main areas of change occurring across the energy market in the UK which will all require enhanced organisational competence, skillsets and incentives:

- Energy system planning
- Market facilitation of flexible resources
- Real time operations

Whilst these areas are not yet translated to local or regional level, it will be critical that local government shapes the response and facilitates energy improvements. This report is intended to provide an overview of the current market landscape, coupled with a regional insight into the current and predicted energy demand and supply.

Throughout this study, the sources of information from various stakeholders are ever changing as the developments are in a constant state of flux. Regarding energy networks, the main challenge has been to provide a robust and up to date analysis of the capacity in the networks. As network operators are constantly under scrutiny by the regulator, they are tasked with exploring innovation to provide a flexible network and alleviate, where possible, reinforcements. However, this is not always possible especially where networks have been underfunded and not maintained due to license constraints.

RLB have reviewed local energy networks alongside how national transmission could benefit the county and local areas, with the intent of understanding how new opportunities for generation and distribution could promote private investment. The below KLOEs are summaries building on from the main body of this report and are derived from the research completed during this study with recommendations stemming from each area of focus.

KLOE: Energy generation, viability, key energy operators, local innovative solutions

RLB have engaged with the Local DNOs to determine the extent of innovation and investment either existing or planned across the region. It has been acknowledged that there is a shortfall in electrical capacity within the Greater Lincolnshire area of power capacity and this has been determined by several developments providing anecdotal evidence to that effect. Our study into future demand mapping has confirmed this as a concern in the short, medium and long term. RLB have engaged with NGED and NPg, with a view of aligning the need for additional capacity and generation.

As part of this study, consideration has been given to how private generating companies could assist the long-term objective of growing and investing in the local areas. Engagement with IDNOs has been sparse and requires further investigation as to why there is perceived lack of interest in local government engagement. Private investment into the energy sector is significant, as is the predicted government investment into projects to progress low carbon generation in the northern part of Greater Lincolnshire. Viability is more likely to be an issue across the other districts in the region; those which

do not have large energy sectors or benefit from strong transport links. However, the UK Food Valley poses a critical opportunity for growth and investment, not only as a sector providing employment, but to attract investment through research and development and generate energy.

NGED and NPg both have future growth strategies in place, which not only outline physical infrastructure, but innovations in digital advancement and smart management. From engagement with both DNOs, there is little concern regarding capacity for developments, or large scale switches from gas to electricity supply. This does contrast the experiences of those developers who have experienced electrical capacity shortfall, as well as the published headroom (see Section 6.0 Future Demand Analysis). RLB have conducted a demand and supply mapping exercise, utilising the published headroom capacity from both DNOs against planned development across the region. This has been supplemented by data provided by large energy consuming organisations across the region to provide as accurate an analysis as possible.

For both DNOs, the key challenge appears to be new connections to facilitate renewable energy generation as well as low carbon technologies such as EVs and heat pumps. This has been outlined by both DNOs as a focus area for future investment, which will facilitate moving to a decentralised, low carbon energy supply. It is worth noting here that predictions are currently modelling heat pump demand to accelerate post 2030, after gas boilers begin to be phased out.

NPg and NGED both engage with LEPs and councils and run programmes of engagement. Through this study, it has been recognised that wider engagement is needed with a variety of stakeholders, but principally greater local authority engagement is needed, combined with enhanced engagement with installers across the region. Installers in this case refers to all renewables and low carbon technologies, ranging from heat pumps through to AD systems.

For viability constraints stalling development, it is has not been a clear indication that energy provision has prevented development across the region. However, it has been clear that there are real constraints in generation of energy. Small scale energy generation is a critical element in decarbonising the UK. The time frames for connection to grid are prohibitive in areas, with concern being present both from DNO perspective and those wishing to generate energy. From analysing the shortfall areas, it is believed that energy supply will be increasingly constrained, and this has the potential to therefore constrain development in two ways. Firstly, prevention of development at all due to difficulties in connecting to the electricity grid. Secondly, prevention of small scale renewables being installed at scale.

To enable targeted investment and a clearer picture of the viability constraints across Greater Lincolnshire, it is recommended that Local Area Energy Plans are undertaken. These should be considered at a strategic level; considering phasing of LAEPs, and where there may be local areas that intersect both DNO coverage. The report has previously covered the recommendation for alignment between the DNOs to mitigate any differing approaches that may mean that LAEPs for neighbouring areas are not consistent.

The benefit of a LAEP will be a fully costed spatial plan that identifies the local energy system changes including energy use and net zero transition with programmed targets. It is worth noting that

a LAEP does not provide 'oven ready' projects, but provides detail required for outline design or masterplan, identifying projects to then progress through to delivery. For Greater Lincolnshire, all LAEPs should have similar overarching long term visions, with detailed strategies that reflect the local requirements. Variances here should include potential for renewable energy generation, and areas of constrained supply identified within the demand/supply mapping exercise and summarised within this report.

A real benefit of a LAEP is to provide staged investment and identify clear areas for improvement which require targeted investment. The risk of not undertaking an LAEP is that a strategic view of energy demand and supply across the local area can get lost amongst smaller standalone projects, removing the forward planning and context of the wider policy and market environment.

A holistic, whole system approach to engagement is recommended to ensure that strategies consider the following:

- Availability of electricity supply
- Stakeholder engagement
- Capture of socio-economic drivers
- Mapping of future scenarios and pathways including to net zero
- Decarbonisation targets
- Changing demand
  - Increased demand through electrification to facilitate decarbonisation
  - Reduced demand through efficiencies
  - Spatial analysis
- Technology trends at domestic, commercial, and industrial levels
- Local renewable schemes and low carbon technologies to boost energy resilience and reduce the impacts of high energy costs
- Governance and delivery

As part of Ofgem's recommendations for transforming UK energy, an area of reform is likely to be energy system planning where new Regional System Planners (RSP) would be introduced to ensure accountability for regional energy system planning. When, or if, this comes into place, it will be a key recommendation that Greater Lincolnshire local government engage with the new RSPs.

Local innovative solutions have been referenced throughout the study, notably in the sector and future energy sections. A recommendation from this study is to align strategic sectors to collaborating on strategies. An example of this could be agrifood with logistics, where agrifood can provide alternative fuels but also plans to decarbonise food related transport. Alternative technologies for energy generation such as Energy from Waste and Biofuels could be of significant benefit to the region; reducing grid energy demands for producers and allowing income through exporting back to the grid. A forum as suggested will allow for DNOs and IDNOs to schedule, plan and strategize to allow for connections and capacity which in turn should reduce wait times and energy capacity issues.

KLOE: Collaborative authorities, alternative energy solutions, forum for private and public sectors, focused investment

Through this study, sector analysis has been carried out to understand current risks and constraints that may be preventing private and public sector development. The opportunity for alternative energy supply at scale within the region is significant – from a review of economic activity across the region, the energy sector has held steady during the recent turbulence caused by the pandemic. This bodes well, particularly when paired with the investment (private and publicly funded) into the Humber region to generate energy supply and industrial economic market increase; this will not only impact the region's energy supply and demand, but the wider economy through employment, infrastructure requirements and innovation.

To provide further context as to the current position of renewable technologies and alternative technologies, planned and operational projects across the region using data from BEIS have been included as an appendix.

Ofgem have raised concerns that there is insufficient, or ineffective, coordination between actors across the energy system at a sub-national level, and that confusion and regional variance in approaches to delivering functions could delay the transition to net zero. For Greater Lincolnshire, these risks are present due to there being two DNOs across the region; equally, proactive collaboration and alignment in approach can drive greater opportunities. GL local government can provide the in-depth understanding of place-based development, including local phased EVs, LCT including power generation.

As a key recommendation of this study, it is suggested that to prepare for the energy market changes, investment to enable required resources and support is sought. The Local Government Association (LPA) has stated that councils will need to play an increasingly predominant role in energy systems planning. Greater Lincolnshire should consider if the existing resources and technical skills for energy planning to enable a holistic partnership approach are present.

From stakeholder engagement there have been two key focus areas – residential demand through the region, and industrial development across the north. Considering districts like Boston and the wider agricultural areas where alternative energy production could be utilised should be prioritised. These could be Energy from Waste, biomass and biomethane; both options can be linked to the thriving agrifood industry. The growth in agrifood presents a challenge of finding net zero/carbon negative networks by providing a secure, reliable, and affordable energy systems. Creating an attractive environment for innovation and investment in this area will address this challenge and further, the ability to export energy (heat and/or power). This could be facilitated through engagement with farms, installers, and potential investors – a focused engagement programme drawing together best practice, lessons learnt and practical experiences to enable information sharing and expert advice.

There are many options for alternative energy generation. Through a focused, strategic approach per sector opportunities can be generated to collaboratively provide a holistic approach to energy generation and distribution; and offering opportunities for end-user cost savings as well as income generation. Each sector has differing constraints, and differing opportunities. Through developing an

energy strategy per strategic sector across Greater Lincolnshire, targeted investment, collaboration opportunities and critically, identification of trends and risks can be enabled. This process should occur in conjunction with the GLLEP, to build on the wealth of regional knowledge, contacts and research already undertaken.

To progress the energy analysis of the region, it is suggested that utilising local authority leadership and central government relationships to drive insight, funnel investment and create an attractive, local centric environment for energy generation and investment would be of benefit. This could be driven through GLLEP, ensuring links to central government are integrated to create insight into funding, future strategies and policy. This streamlined approach of generating a forum of collaborative, shared knowledge can facilitate a centre of excellence and innovation, to attract private investment into the region and strengthen the robustness of energy supply in the future.

Prior to deregulation of the utility market, developers and investors could only engage with the monopolistic incumbent statutory utility providers. These organisations still exist today but are all now in private ownership. However, the obligation to provide a connection to a customer remains. It is suggested that any forum/committee reviewing the energy market going forward should appraise different models available since de-regularisation to determine which have the potential to attract private investment and innovation; this has been demonstrated by commercial organisations reaching out for information beyond DNOs to explore other options.

The GLLEP predicts that the low carbon and energy economy, already worth "£1.2bn per annum to Greater Lincolnshire, holds exceptional potential offering an unprecedented level of private investment of £60bn over the next fifteen years." This demonstrates that alongside ensuring viability of developments across the region, there is a critical opportunity to expand the energy sector to grow the local economy, to develop an offering that could be of national importance through enhancing existing skillsets, leveraging locational benefits, and providing an attractive environment for investment. Developing a forum, or task force, that proactively engages with the energy sector with the focus of driving strategic investment from both private sector and central government will be key to appearing as an attractive investment opportunity.

Existing groups and forums do not currently have consistent structured engagement with NPg and NGED. A key recommendation from this study is to integrate local DNOs into energy forums and committees to improve information sharing, collaboration and continuous improvement. There are NGED Local Investment Workshops, one of which covers Lincolnshire. At present, this appears to be the main opportunity to provide feedback on local investment. It is clear that a coordinated approach between Greater Lincolnshire and local DNOs would be of significant benefit.

When considering the transition to net zero, it is clear that local councils will play a pivotal role in shaping energy landscape, and shaping the route through local leadership. Ofgem held a consultation

in May 2023[68] regarding the future of local energy institutions and governance; focusing on accelerated decarbonisation and decentralisation of generation and demand.

Energy generation and network capacity should be planned and coordinated to achieve net zero deadlines, whilst mitigating the consumer borne impacts of fossil fuel price fluctuations. Local network planning needs to be in alignment to drive system wide benefits as well as flexibilities nationally.

For this KLOE, the key recommendation is to develop the following;

- Enhanced capability and capacity at a regional level with local expertise to drive energy transformation
    - Investigation into appropriate sourcing of expertise, which could be driven via internal upskilling, external recruitment or direct placements from DNOs
- Facilitation of a forum

KLOE: energy and utilities connectivity, digital infrastructure, and the internet of things.
Connectivity between energy and other utilities provision is mixed. Local DNOs have identified that they work closely with the gas networks to understand future planning, including conversions to hydrogen. Water supply has been noticeably less concerning for developments across most sectors. However, with the increasing investment in industrial hubs across Greater Lincolnshire and the Humber, the focus of water supply to industry is becoming critical. Engagement held during this study has shown developers reaching out to IDNOs for both energy and water supply.

The National Grid is commencing with the next stage of a new Government-backed project to explore how satellite imagery and data analytics can improve the resiliency of the UK's gas and electricity infrastructure, potentially helping to reduce blackouts while cutting emissions.

Digitalisation is disrupting and bringing benefits to diverse sectors, including energy. A Smart Energy System is an approach in which smart electricity, thermal, and gas grids are aligned to identify synergies to achieve a solution whether at building, region, or system level. This links to the whole energy system approach. Through integrating digital links, this approach can drive down costs, enhance efficiency and reduce carbon emissions.

Across the wider Midlands region there are multiple projects progressing digital integration into energy systems. These include:

- Smart Energy Network Demonstrator (SEND) project is the largest of its kind in Europe. The University of Keele is working in partnership with Siemens and Engie/ EQUANS to create a smart energy network of energy generation, distribution and storage across different energy sources at the university campus
- The Trent Basin project in Nottingham is a housing development focused on local smart energy systems
- The Regional Energy Systems Operator project in Coventry has examined new ways of managing energy at a local level

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[68] Ofgem Consultation

- Plans for the University of Birmingham and Siemens to create a smart campus with 38,000 sensors linking to a smart energy system.

There are projects across Greater Lincolnshire progressing digital advancement in energy:

- Smart Energy Project in North Lincolnshire is focused on boosting renewable energy use in small and medium-sized enterprises (SMEs), council and other public sector owned buildings in the area by providing a one stop shop of energy and low carbon services to SMEs as well as facilitating large scale investment in public infrastructure
- University of Lincoln SEP (Sustainable Energy and Power) research group leads systems thinking and applied research to develop new energy delivery approaches for heat and electricity. The group focuses on combined demand profiles, integrating technologies and AI.
- University of Lincoln: Stabilising the National Grid research, applying Internet of Things technologies to stabilise industrial energy demand (Demand Side Response)
- SMARTGREEN project is a research collaboration between nine research institutions and three commercial companies internationally, including University of Lincoln and Lincoln Institute for Agri-Food technology. The project analyses big data on climate and production with practical SME level demonstration to show how agri-food industry can improve energy efficiency, for example through sensors, measurement and controls in greenhouses.

Beyond the financial benefits, Smart Energy Systems are crucial for energy security. Small-scale and local low-carbon energy generation combined with proper energy management and distribution would allow for the region to become more self-sufficient in managing its energy demand and supply. The region would become less reliant on outside energy sources, thus becoming more resilient against the volatility of global energy prices. The implementation of various Smart Energy interventions for monitoring and optimisation would be able to better address the energy flows, further helping to match energy needs of different areas.

At Midlands level, there has been a recent study which has recommended a regional coordination body for Local Area Energy Planning[69], to provide a focus for data sharing on Smart Energy Systems and their deployment, including microgrids.[70] This would involve local and combined authorities through to energy companies and consumer organisations. It is recommended that GL engage with the MEP initiative and replicate a similar forum. As a critical player in the MEP for energy generation, particularly with the Humber energy investment and offshore wind, GL have the potential to rapidly enhance the smart energy approach. This could be facilitated through an energy forum, as recommended within the report conclusion.

Energy systems can be improved by targeting greater levels of resource toward low-carbon electricity generation such as solar, wind and nuclear and a focussed programme on developing a Smart Energy Systems industry. Greater Lincolnshire would benefit from a combined resource pooled from all councils, and engagement with the wider regions forums and initiatives. Across Greater

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[69] Home | Midlands Engine
[70] Local Area Energy Planning - Energy Systems Catapult

Lincolnshire there is a strategic goal to improve highly skilled employment; smart energy systems can facilitate this. This could be developing a Smart Energy skills programme to (re-)train those in the energy sector supporting the accelerated delivery of Smart Energy Systems, and attract resource into the sector through presenting the opportunity to help shape the future of energy in an innovative way.

KLOE: private and public sectors collaboration, targeted investment in priority sites

There are various forums across Greater Lincolnshire and neighbouring regions that consider the energy sector either as the main, or one of the key areas of focus. Of the forums reviewed, none appear to be focused solely on investment collaboration to drive schemes forward.

GLLEP has created an Energy Council, to focus on the progression of the current and long-term outcomes and opportunities to a whole-system approach for the Greater Lincolnshire area; and for the transformation of energy, particularly the opportunities around developing a rural innovation test bed for energy and water (and waste). The Energy Council is a Strategy Advisory Board, with a remit to provide high-level strategic guidance to implement the Enabling Framework for Greater Lincolnshire, make strategic recommendations for long-term energy goals, support the active engagement of businesses, and potentially suggest funding opportunities as needed to implement the Enabling Framework.

The Energy Council is intended to be predominantly private with public representation, however the board does not have representation across all councils. The current format of the board as of March 2023 include representation from:

- Global Smart Transformations
- Lincolnshire County Council
- Lincolnshire STP NHS
- Cadent Gas
- Singleton Birch
- South Kesteven District Council
- North Lincolnshire Council
- Sustainable Direction
- National Grid
- N4 Energy Solutions Ltd
- Siemens Energy
- HCF CATCH Ltd
- Branston Ltd
- Offshore Renewable Energy Catapult

There are two potential avenues to enable the forum for private and public sectors to collaborate on driving investment and energy strategy:

Develop a new forum focused on attracting investment into priority sites

- Strategic oversight board focused on development viability and energy demand / supply
- Focus groups to be developed for each major investment site

Enhance an existing forum such as the Energy Council

- Investigate if a sub-group solely focused on investment would be a viable option through discussion with the committee board
- Sub-group to be formed of local district/authority, DNOs, private sector, and installers
- Engagement to be focused on Greater Lincolnshire, whilst maximising links to central government and wider Midlands region.

For this forum, the purpose should be focused on the future of energy demand and unlocking regional potential. As explored throughout this study, Greater Lincolnshire holds significant potential for not only renewable energy generation, but also to showcase the benefits of collaboration between key energy organisations. For example, the two DNOs across the region, National Grid ED and Northern Powergrid, both of which are keen to promote engagement and collaboration to ease the challenges ahead.

9.0 SUMMARY

Greater Lincolnshire is in a unique position to drive energy solutions and attract investment, through key strategic sectors that are predicted to experience sustained growth, to the locational positioning with strong, rail, road and port links. The low carbon and energy economy holds potential for £60bn private investment.

A key part of this potential, the Humber Estuary is connected with at least 25% of the UK's energy production, while the south bank of the Humber lies at the centre of an emerging offshore wind market. There are significant differences across Greater Lincolnshire, notably the shift of industrial activity in the north to rural areas. One theme has been clear throughout analysis of all sectors and regions, that there is a clear shift towards innovation and alternative energy sources across the region to swiftly progress towards net zero, and the need to accommodate electrification in virtually all sectors.

Net zero is a common theme across all sectors, echoed by the shift in energy providers and increase in private investment. At a domestic scale, there are four key areas impacting future energy demand, all supporting a focus on electrification:

- Heat pumps
- Electric vehicles
- Retrofit and energy efficiency measures
- Domestic scale renewables

Across other sectors, alternative technology investment appear to be focused either in the Humber region (including CCS) or linked to the agrifood sector, e.g., biomass and AD.

Initiatives to support SME's have been successful in the region; a collaborative approach could foster increased uptake of local energy solutions to enhance energy resilience, and reduce energy costs.

All sectors have been impacted by the cost of living crisis to some degree, with energy intensive organisations being hit hardest. Reducing energy consumption eases financial pressures and can facilitate sustainable growth and employment.

Providing access to information, expert advice and options could be critical to long term energy sustainability across Greater Lincolnshire, which could take the form of an Energy Hub.

It appears that across Greater Lincolnshire there is inconsistent collaboration in regards to energy, whether that is in relation to supply and demand, or through exploring alternative solutions.

There are pockets of exceptional collaboration, innovation and best practice that should be shared with private and public organisations across Greater Lincolnshire, with the overarching goal of attracting investment into the region, alongside decarbonisation, reducing financial pressures, and improving energy resilience. Smart energy solutions should sit alongside physical infrastructure investment, with local stakeholders regularly engaging with DNOs to align DNO/DSO investment with local requirements.

The below is a detailed summary of the recommendations from this comprehensive study, aligned with the KLOEs brief:

Theme	Recommendation	Detail	Timeframe	Investment	Location
Collaboration	Open Networks Insights Forum	Quarterly online forum	Short term	Capacity of appropriate resource	Page 18
Energy transformation	Align strategic sectors energy strategies. Geothermal energy and biomass project collaboration and lesson learned sharing.	Integrate geothermal and biomass energy projects into GLLEP Energy forum or other appropriate forum.	Short term	Capacity of appropriate resource	Section 4
	Develop an outline strategy for integrating geothermal into the region's long-term energy landscape. Biomass strategies and investment should be closely linked to CCS, with a regional strategy considering socio-economic factors.	Strategies should be integrated into LAEPs with an overarching GL wide strategy.	Medium Term	Internal or external funding to facilitate strategy development	
Energy transformation	Mapping of high intensity users in urban areas, linking together organisations such	Heat network study to be undertaken. Applications to Heat Network Transformation	Medium term (funding applications to be sent	Internal or external funding to undertake mapping exercise.	Page 30

Theme	Recommendation	Detail	Timeframe	Investment	Location
	as the NHS trusts with local industrial businesses to power residential heating.	Programme (HNTP) to be submitted.	prior to closure of scheme in 2025)	Capacity of appropriate resource for funding applications.	
Collaboration	Alignment of DNO strategy across GL to ensure LAEPs are consistent	Energy management including ANM Identify targeted areas of improvement / upgrades to infrastructure to understand if potential case studies for energy mgmt.	Short term	Capacity of appropriate resource to engage with both DNOs	Page 41
Collaboration	Integrate aquaculture into agri-food sector energy analysis. Consider wider sector collaboration where there are known synergies e.g. logistics and transport, logistics and agri-food.	Due to the anticipated increase in transport related to agri-food and aquaculture, collaborate on transport strategies where there is anticipated increase in EV demand across combined sectors.	Medium term	Capacity of local resource Internal or external funding to work with GLLEP to integrate energy demand from both sectors	Page 88
Innovation	Undertake LAEP for all areas within GL	Determine appropriate areas (noting the DNO boundaries) for LAEPs to be undertaken. LAEP to identify short and medium term actions / projects, with	Short term	Short term resource from each relevant area (district, county etc) to confirm boundaries.	Page 41

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Theme	Recommendation	Detail	Timeframe	Investment	Location
		prioritised investment. Scope should include electricity, heat, gas, future innovations inc. hydrogen, generation and storage as well as changing built environment demands.	Medium term	Funding to be sourced for each LAEP whether funded centrally or on a local basis.	
Innovation / Collaboration	Integration with Regional System Planners (RSPs) when / if put in place	GL local authorities engage with the new RSPs to determine accountability for regional energy systems planning.	Medium – Long term	Capacity of dedicated resource internally to engage with RSPs, Ofgem and DNOs. Potential for further investment if RSPs scope is determined to be closely integrated with local authorities.	Page 75
Innovation	Smart Energy Skills programme	Enhance existing skills in energy sector supporting the accelerated delivery of Smart Energy Systems, and attract resource into the sector through presenting the opportunity to help shape the future of energy in an innovative way.	Medium – long term	Pooled resource from GL, consider funding sources such as LCSF (Low Carbon Skills Fund) or other grants from organisations such as the DNOs	Page 80

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Theme	Recommendation	Detail	Timeframe	Investment	Location
Energy transformation	Shortfall feasibility studies	Identify the most suitable solution to the primary substation demand headroom restrictions, a feasibility study should be carried out for each area identified as a priority 1 shortfall. This feasibility study would need to be carried out with the relevant Local Plan for that particular area and in conjunction with the net zero strategy.	Short term	Resource and funding to deliver feasibility studies	Section 7
Energy transformation	Energy PPP viability study	Study to determine if an Energy PPP would be viable for GL. A key area to explore would be Energy Performance Contracts	Medium – long term	Resource to fund study, subsequent investment if deemed viable.	Page 88

Building on the above, a wider set of overarching suggested recommendations from this study are detailed below:

CREATE A REGIONAL FUTURE ENERGY FORUM

Throughout this study, it is clear that the energy landscape and market is undergoing a period of rapid change and innovation whilst experiencing constraints on demand and supply. For Greater Lincolnshire to capitalise on the opportunity of shaping the energy market in the region, we recommend developing a private and public future energy forum / committee, focused on demand vs supply.

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Throughout the data analysis we found that significant developments often hadn't engaged with the local DNOs. This lack of engagement with a key stakeholder impacts the viability of future development, the robustness of predicted future demand, and slows down the process of enabling new developments through lack of early engagement.

As part of this forum, we recommend that beyond energy demand and supply management, consideration of energy reduction initiatives are included alongside efficient resource management.

The management of resources such as electricity will benefit society and reduce costs as well. The more energy efficiency and resource management that is undertaken at scale, the greater benefit that will transpire. Reducing of existing demand and improving efficiencies whilst identifying new energy infrastructure requirements to promote growth will be critical to robust, resilience energy for the region. Working at scale across several LAs to a unified strategy will also help position the region for the emerging green economy and bring enough local demand to protect the competitiveness of the region for the future by creating stable incentives to grow local green skills and business capacity.

Energy supply is critical to commercial developments, therefore engagement with Greater Lincolnshire energy stakeholders (private and public) will be key to enabling development.

Organisations such as British Steel are engaged with UK government, as UK wide policy driving decarbonisation is integral to achieving targets. Smaller-scale organisations and regional players will also require not only access to support, but a forum to understand capacity across all levels of energy infrastructure in the area, and are less likely to have existing relationships.

We recommend that a Greater Lincolnshire Energy Committee/Forum is created. Our recommendation is to consider the following to participate:

- Key relevant and influential members of each local authority
  - This should include those involved directly in energy, infrastructure and development
- Representatives of each DNO
  - This should include those who can advise on the following:
    - Transformation projects
    - Local initiatives
    - Knowledge sharing from other regions
    - Funnel queries to the relevant parties
    - Progress against business plans
- Representatives of significant future demand / development including but not limited to
  - Able Energy Park
  - Zero Carbon Humber
  - Significant residential developments
  - Significant industrial developments

It is worth noting that there are existing forums which may be a preferred route rather than creating a new entity. This should be a joint decision formed by all councils across the region.

EXPLORE ENERGY FOCUSSED PUBLIC / PRIVATE PARTNERSHIP

Whilst public-private partnerships (PPPs) can be challenging to deliver and not without controversy, robust and well-coordinated partnerships present opportunities to bring together the resources, expertise, and powers available in ways that cannot be achieved by either sector in isolation. As such, councils across the UK are now exploring how this investment could unlock a range of social, environmental, and economic benefits aligned to local and national priorities.

When considering PPPs from a collaborative angle, there are two impacts that the energy sector can have. These are net zero and energy security/fuel poverty. "The cost of achieving net zero is calculated to be at least £200 billion. If we can find the right financing models we can turn this cost into an investment opportunity, and a 'skills and jobs dividend'. Local and national government need to work together with the investment community to realise this massive dividend."[71]

An example of this is Energetik, an energy company that was established by Enfield Council and has wide ambitions to service residents across the borough with low carbon energy, with surpluses reinvested into infrastructure and education programmes. Energetik highlighted that councils are well placed to deliver more affordable energy solutions for residents. Where the private sector would seek to return a margin, the public sector can elect to reinvest surpluses to deliver low and transparent tariffs.

There have been success stories across the region of public funding facilitating take up of energy efficiency measures, such as the Smart Energy Project in North Lincolnshire. Addressing SMEs across the region and linking together expertise with installers, providers and funding streams is a valuable resource for SMEs that are unlikely to have resource in house or access to expert advice. It is recommended that as an outcome of this report, a study should be undertaken to determine if an Energy PPP would be viable for Greater Lincolnshire. A key area to explore would be Energy Performance Contracts, which is an agreement to deliver energy savings and / or energy generation whilst providing a guaranteed energy saving plus cost reduction.

As private investment has focused upon large scale renewable and alternative technologies, there appears to be a gap to address existing organisations rapidly decarbonise through energy efficiency retrofit measures, local energy generation, community energy generation linked to the agrifood industry, and exploring innovations such as Vehicle to Grid technologies.

For Greater Lincolnshire, the following areas are deemed to demonstrate value in progressing feasibility of PPPs:

- District Heat Networks: these should focus on urban areas, and link together industrial and heavy energy use sectors with residential / commercial to gain maximum benefit.
- Agri-food / aquaculture: determining the scope of the opportunity to enhance the energy generation abilities of both sectors when combined with the significant on-going investment into alternative energy generation and carbon capture in the north of Greater Lincolnshire. This can provide much

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[71] LGA, Public-Private Partnerships

needed investment into the agricultural sector, whilst providing assurance of socio-economic factors across the region.

- Vehicle to grid and EV charging: there is a significant opportunity for local authorities to take a leading role in shaping the EV infrastructure network across the region. This will include ensuring accessibility for those not within dense urban areas, and enabling long term investment for Greater Lincolnshire. Energy companies are increasingly seeking opportunities to install or own EV assets, which gives local authorities the potential to utilise existing land or go into partnership for charging stations.

- Renewable energy projects: there's an opportunity to capitalise on private sector ESG ambitions through accessing funding for projects that provide public benefits. An example of this can be entering Power Purchase Agreements with energy providers; allowing authorities to support renewable infrastructure without taking on the complex demands of developing on authority assets. For Greater Lincolnshire, the study has shown that there's varying interest in renewable energy projects across the region. For coastal areas, on-shore wind should be considered. Solar energy projects should be considered across both rural and urban areas; utilising the often underutilised roof spaces across built up areas, enhancing car park structures (shading or roof spaces), providing on site small scale renewables as part of a larger strategy can all be beneficial.

- Energy efficiency of built environment: a critical piece of addressing energy demand and supply is to address the demand driven from the built environment, which aligns to net zero aspirations. To facilitate this, there are various schemes that local authorities can access to drive efficiencies. An example of a partnership is Energiesprong, which is a whole house approach to retrofit, which guarantees energy performance of homes and shows real life performance – enabling housing associations and other organisations to benefit from reduced operating costs. As a case study, Nottingham City Council and Nottingham City Homes delivered Destination Zero, which was funded by BEIS.
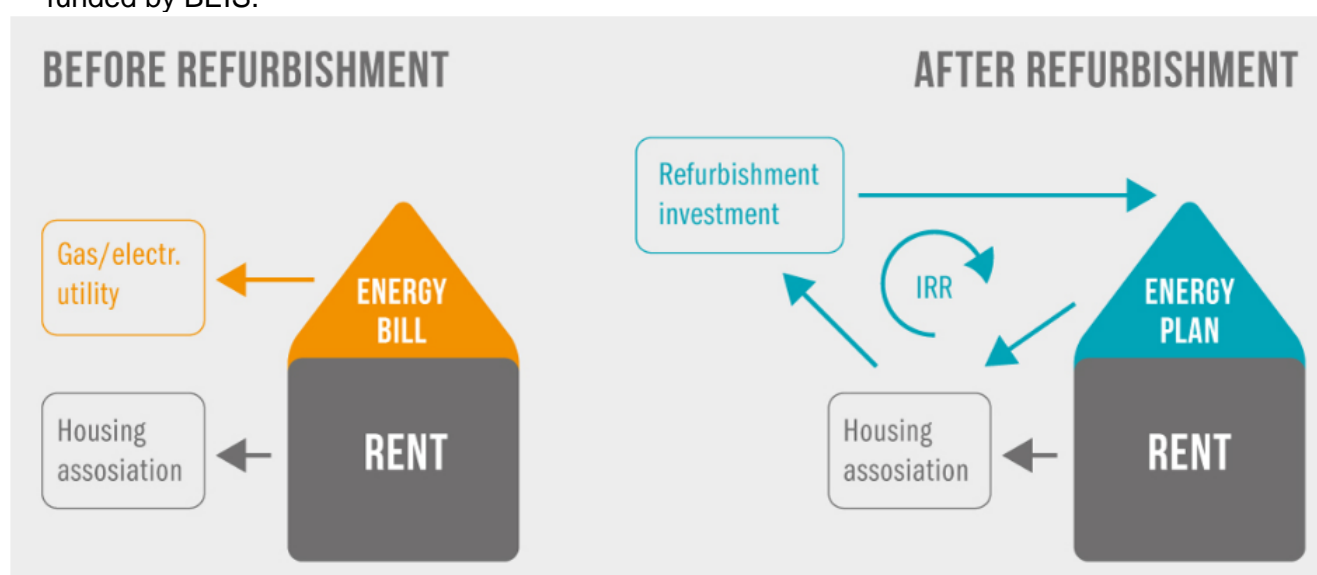
Figure 19 Energiesprong, 'How does it work'

To facilitate a PPP, the LGA recommend the below structure be followed:

- Defining the vision and outcomes
  - For Greater Lincolnshire, consideration should be given to what outcomes a successful energy strategy and related partnerships would result in.
    - Energy resilience and security
    - Addressing energy poverty
    - Transition to net zero
      - Focused approach to alternative energy
    - Utilising energy as a driver for investment
      - Two approaches: energy supply to facilitate development, or through inward investment into the energy sector directly
- Scoping
  - Establishing the roles for public and private sectors i.e. who sets the strategy, who delivers the strategy, who is responsible for outcome delivery, who is responsible for assurance and governance
  - Investigating if Greater Lincolnshire have sufficient resources including financial to enable a successful partnership
- Reviewing partnership options
  - Significant specialist resource will be required to:
    - Undertake market engagement to gauge interest
    - Undertake legal and commercial review
    - Stress test forecasts and budgets
- Identifying right route to market
  - Greater Lincolnshire local authorities are in a strong position to determine best route to market. It is advisable that the GLLEP are integrated into this stage, to enable market insight, provide resources and support and demonstrate market confidence.
- Preparation
  - Governance, oversight and delivery control will be critical. For PPPs, it would be unlikely that partnerships would cover the entirety of the region, but in the case that multiple districts/authorities are involved, clear governance procedures will be required.
- Managing
  - The critical element here is that a PPP requires investment from the public sector bodies involved on an ongoing basis throughout the contract/partnership length. Securing committed resources will enable financial and risk management as well as monitoring value creation.
- Evaluation and handover
  - Integration an evaluation of the whole life of the project into the deliverables at an early stage is advisable. As the energy market is evolving, so should PPPs which Greater Lincolnshire should be flexible and adaptable in their approach.

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CONCLUSION: THE NEED FOR A REGIONAL STRATEGY

This study has clearly demonstrated that the need for an integrated regional strategy on energy and net zero involving key players like DNOs and all LAs to deal with the increasing complexity and emerging options for linking regional net zero with future economic growth.

Energy investment was previously focused on cost and risk, whereas in the context of national and regional policy and strategies, sustainability / green energy is viewed as investment and opportunity.

Building on the work that GLLEP has undertaken to position Greater Lincolnshire as open to business investment, driving forward clean energy growth will impact the key strategic sectors. This takes seven key forms:

- Providing a test bed for innovations building upon well-established industries such as agrifood
- Enhancing existing skillsets in the energy sector and positioning the region at the forefront of smart and green energy systems
- Engage with national government to attract funding and investment across the region
- Improving communication and engagement from DNOs and developers to address concerns of capacity stalling development
- Develop a clean energy strategy that strategically focuses upon the areas with limited capacity as identified through the future demand mapping exercise
- Regional Energy Parks could provide large communities with a stable local supply of low carbon heat and electricity, maximising local resource and enabling local pricing structures
- Humber region will likely play a critical role in this approach. Smaller regional energy parks should be considered across Greater Lincolnshire, building on larger parks to align with and complement energy production and management.

For Greater Lincolnshire, the focus of a regional approach should be on energy capacity and generation innovation, promoting the region's unique characteristics such as the strong agri-food sector and strong links to energy, industry and CCS to drive forward investment and growth into ensuring the key economic sectors can secure sustainable growth.

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APPENDIX A

PROPOSED RENEWABLE ENERGY SCHEMES

North Lincolnshire

Name	Location	Type of Generation	Generation Start Date	Generation Capacity (MW)
Green Energy Park	Flixborough Wharf, Flixborough Industrial Estate, Scunthorpe	EFW Incineration	2025/2026	95.00
Little Crow Solar Park	Land located 0.6km to the east of the British Steel site at Scunthorpe,	Solar		150.00
Little Crow Solar Park	Land located 0.6km to the east of the British Steel site at Scunthorpe,	Battery	2022	90.00
Winterton Landfill Site - Ground Mounted Solar PV Arrays	Land on the restored part of Winterton Landfill site, access roads to landfill site, Winterton	Solar	2023	5.00
Winterton Road - Battery Energy Storage	N/O Gala Bingo, Winterton Road, Scunthorpe	Battery	N/A	95.00
Sweet Briar Farm - Solar Farm	Sweet Briar Farm, Carr Road, Ulceby	Solar	N/A	39.00
Scawby Brook, Brigg - Battery Storage	Power Station Access Roads To Power Station, Scawby Brook Brigg	Battery	N/A	99.00
WM Morrison Supermarkets - Solar Photovoltaics	WM Morrison Supermarkets Plc, Access road to Morrisons Superstore, Scunthorpe	Solar	N/A	0.62
Elsham Wold Industrial Estate - Solar Panels	GFP Agriculture, Office, Warehouse, Pegasus Road, Elsham Wold Industrial Estate, Elsham,	Solar	N/A	0.29

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Name	Location	Type of Generation	Generation Start Date	Generation Capacity (MW)
Elsham Wold Industrial Estate, Pegasus Road - Solar Panels	GFP Agriculture, Office, Warehouse, Pegasus Road, Elsham Wold Industrial Estate, Elsham,	Solar	N/A	0.31
Atherton Way - Solar Panels	Rocal Limited, Atherton Way, Brigg,	Solar	N/A	0.24
Frederick Gough School, Grange Lane South - Solar Panels	Frederick Gough School, Grange Lane South, Scunthorpe	Solar	N/A	0.21
Green Energy Park	Flixborough Wharf, Flixborough Industrial Estate, Scunthorpe	Battery	2025/2026	30.00
Green Energy Park	Flixborough Wharf, Flixborough Industrial Estate, Scunthorpe	Hydrogen	2025/2026	10.00

North East Lincolnshire

Name	Location	Type of Generation	Generation Start Date	Generation Capacity (MW)
North East Lincolnshire Energy Park	South East of Immingham, North East Lincolnshire	Solar	N/A	50.00
Grimsby Solar Farm	Grimsby, North East Lincolnshire	Solar	2024	50

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West Lindsey

Name	Location	Type of Generation	Generation Start Date	Generation Capacity (MW)
Gate Burton Energy Park	Gate Burton, West Lindsey	Solar	2028	500.00
Cottam Solar Project	Cottam, West Lindsey	Solar	2024	600.00
West Burton Solar Project	West Burton, West Lindsey	Solar	2024	480.00
Tillbridge Solar Project	Tillbridge, West Lindsey	Solar	2025	500.00
Welton Gathering Centre, Sudbrooke - Battery Storage	Welton Gathering Centre, Sudbrooke	Battery	N/A	3.00
Hemswell Biogas, Hemswell Cliff Industrial Estate - Anaerobic Digestion	West of Hemswell Biogas Ltd, Hemswell Cliff Industrial Estate, Hemswell Cliff	Anaerobic Digestion	N/A	17.00
The Old Airfield Solar Farm	The Old Airfield, West Lindsey	Solar	N/A	49.80
Barff Lane - Farm Anaerobic Digestion Plant	Barff Lane, Glentham, Market Rasen	Anaerobic Digestion	N/A	6.8 (a year)
River Cottage, Scampton - Solar Panels	River Cottage, Tillbridge Lane, Scampton	Solar	N/A	0.19

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East Lindsey

Name	Location	Type of Generation	Generation Start Date	Generation Capacity (MW)
Low Farm (Anesco)	Wainfleet, East Lindsey	Solar	N/A	50.00
Hatton Solar Farm	Sotby Woods, in turton Road, Hatton, East Lindsey	Solar	N/A	50.00
Campney Grange, Bucknall - Solar Panel	Campney Grange, Campney Lane, Bucknall, Woodhall Spa	Solar	N/A	0.17
Mallows Lane - Solar Farm & Battery Storage	W/O Mallows Lane & N/O Pymoor Lane, Sibsey, Boston	Solar	N/A	10.00
Mallows Lane - Solar Farm & Battery Storage	W/O Mallows Lane & N/O Pymoor Lane, Sibsey, Boston	Battery	N/A	5.30

North Kesteven

Name	Location	Type of Generation	Generation Start Date	Generation Capacity (MW)
Springwell Solar Farm	North Kesteven - Between Lincoln and Sleaford	Solar	2030	800.00
Heckington Fen Solar Park	Between Sleaford and Boston. North Kesteven	Solar	N/A	500.00
Barn Farm, Navenby - Solar Panels	Barn Farm Lowfields Navenby	Solar	N/A	3.00

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Name	Location	Type of Generation	Generation Start Date	Generation Capacity (MW)
Boothby Graffoe - Solar photovoltaics panels	Lowfields Farm Castle Lane Boothby Graffoe Lincoln	Solar	N/A	0.22
Barn Farm Lowfields, Navenby - Biomass boiler	Barn Farm Lowfields Navenby	Biomass (dedicated)	N/A	1.60
Skinnand Manor Farm, Parsons Lane - Biomass Boiler	Skinnand Manor Farm Parsons Lane Navenby	Biomass (dedicated)	N/A	1.60
Poplar Farm, Lowfields - Biomass Boiler	Poplar Farm Lowfields Navenby Lincoln	Biomass (dedicated)	N/A	1.60
Castle Farm, Castle Lane - Biomass Boiler & Agricultural Building	Castle Farm, Castle Lane, Lowfields, Navenby, Lincoln	Biomass (dedicated)	N/A	1.60
Noble Foods, Hives Lane - Solar Panels	Noble Foods Limited, Hives Lane, North Scarle	Solar	N/A	0.37

South Kesteven

Name	Location	Type of Generation	Generation Start Date	Generation Capacity (MW)
Mallard Pass Solar Farm	East Coast Mainline near Essentine, South Kesteven	Solar	2026	350.00
Belvoir Estate - Solar farm	Land To The South West Of Easthorpe Lane Muston	Solar	N/A	50.00
Environcom - Thermal Treatment Plant	Environcom Limited, Great North Road, Grantham	EfW Incineration	N/A	N/A
Mid UK Recycling, Caythorpe Heath Lane - Solar Photovoltaic Panels	Mid Uk Recycling Limited, Caythorpe Heath Lane, Caythorpe, Grantham	Solar	N/A	0.97
Bypass Solar Farm	S/O The A1, Foston By-Pass, Foston, Grantham	Solar	N/A	50.00
Gonerby Moor, Great Gonerby - Solar Farm	Gonerby Moor, Great Gonerby	Solar	N/A	50.00
Morrison - Roof mounted solar panels	W Morrison Supermarkets Ltd Uffington Road Stamford	Solar	N/A	0.68
BGB Engineering Limited - Solar Panels Scheme	357 Dysart Road, Grantham	Solar	N/A	0.21
Openfield, Colsterworth - Solar PV System	Openfield Honey Pot Lane Colsterworth Grantham	Solar	N/A	0.38

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Name	Location	Type of Generation	Generation Start Date	Generation Capacity (MW)
Cherryholt Road - Solar Panels	Cherryholt House Cherryholt Road	Solar	N/A	0.17
Gonerby Moor - Battery Storage	South Of Cliff Lane Gonerby Moor	Battery	N/A	N/A
Heathland House, High Dike - Biomass Boiler	Heathland House High Dike Ancaster	Biomass (dedicated)	N/A	0.25
New Earth Solutions West, High Dike - Solar Panels & Battery Srorage	New Earth Solutions (West) Ltd, Copper Hill Industrial Estate, High Dike, Wilsford	Solar	N/A	4.80
New Earth Solutions West, High Dike - Solar Panels & Battery Srorage	New Earth Solutions (West) Ltd, Copper Hill Industrial Estate, High Dike, Wilsford	Battery	N/A	Co-located with above

Boston Borough

Name	Location	Type of Generation	Generation Start Date	Generation Capacity (MW)
Vicarage Drove Solar Farm & Battery Stoarge	Boston, Bicker Drove	Solar	2023	50.00
Vicarage Drove Solar Farm & Battery Stoarge	Boston, Bicker Drove	Battery	2023	20.00

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Name	Location	Type of Generation	Generation Start Date	Generation Capacity (MW)
Boston Landfill, Wyberton - Solar PV Array	Boston Landfill, Slippery Gowt Lane, Wyberton, Boston	Solar	N/A	9.70
Boston Alternative Energy Facility (BAEF)	Riverside Industrial Estate, Boston	EfW Incineration	N/A	80
Station Road, Swineshead - Solar PV System	Reflex Labels, North End Business Park, Station Road, Swineshead, Boston	Solar	N/A	0.25
Riverside Industrial Estate - Solar PV Panels	Howard Tenens, Riverside Industrial Estate, Marsh Lane, Boston	Solar	N/A	0.89
Marsh Lane - Solar PV Panels	Howard Tenens, 1 Tenens Way, Boston,	Solar	N/A	0.89
TB Containers Limited, Brenton Villa - Solar Panels	Brenton Villa, Broadgate, Boston	Solar	N/A	0.38

South Holland

Name	Location	Type of Generation	Generation Start Date	Generation Capacity (MW)
Sutton Bridge Solar Farm	Land to the South of Centenary Way Sutton Bridge Spalding	Solar	N/A	50.00
Caudwell Solar Farm	Hamlet of Holbeach St Matthews	Solar	2022	50.00

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Name	Location	Type of Generation	Generation Start Date	Generation Capacity (MW)
Bowman Stores Marsh Road	Bowman Stores Ltd, Marsh Road, Spalding, Lincolnshire	Solar	N/A	1.00
Worldwide Fruit - Solar Panels	Worldwide Fruit Limited, Apple Way, Pinchbeck, Spalding	Solar	N/A	0.36
Spalding Energy Park - Battery Storage	Spalding Power Station West Marsh Road Spalding	Battery	2026	550.00
Cowbridge Road, Bicker Fen - Solar Array	W/O Cowbridge Road, Bicker Fen, Boston	Solar	N/A	50.00
Cowbridge Road, Bicker Fen - Battery Storage	W/O Cowbridge Road, Bicker Fen, Boston	Battery	N/A	Co-located with above
J O Sims, Pudding Lane - Solar Panels	J O Sims Ltd. Pudding Lane Pinchbeck	Solar	N/A	0.30

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APPENDIX B

GLOSSARY

GLOSSARY

Air Pollution Control Residue (APCR): This is typically a mix of ash, carbon, and lime. It is a hazardous waste which is currently disposed of at a hazardous waste landfill or undergoes further processing such as washing or stabilisation to send to a non-hazardous landfill.

Demand Flexibility Service: This is a service run by the electricity suppliers and aggregators to manage the demand flow of electricity on the national grid. By reducing demand through rewarding participating customers to turn down their usage when we demand is high.

Distribution Network Operator (DNO): A DNO is a company licences to distribute electricity in the UK. These companies operate the system of cables and towers that bring electricity from the national transmission network to homes and businesses.

Distribution System Operators (DSOs): DSOs are the operating managers/owners of energy distribution networks. They are responsible for distributing and managing energy from the generation sources to the customers.

EHV (33kV and 66kV) Level: Extra high voltage networks are circuits or substations with a voltage of 33,000V (33kV) or above. There are several advantages of higher voltage networks, such as reduced power loss through transmission lines, greater network reach and improved efficiency and operational savings.

Energy Systems Catapult Initiatives: This provides technical, commercial and policy expertise to drive innovation across the whole energy system.

Incinerator Bottom Ash (IBA): This is a form of ash produced in incinerator facilities. It is discharged from the moving grate of municipal solid waste generators. Once IBA is processed by removing contaminants, it can be used as an aggregate.

Independent Distribution Network Operators (IDNOs): IDNOs develop, operate and maintain local electricity distribution networks in the UK. IDNOs connect to the local distribution network or to the transmission network to serve new housing and commercial developments. They are responsible for managing and operating their local networks, including all future maintenance and fault repairs. The main difference is that IDNOs operate nationwide, without regional restrictions, to manage local networks. They are also regulated by Ofgem.

Midlands Engine Partnership (MEP): This is a pan-regional partnership with the aim to provide the region with a single, unified voice to speak to government in order to drive pan-regional economic prosperity and boost productivity through concerted investment and long-term commitment. It is the largest regional economy in the UK outside London.

Network Innovation Allowance (NIA): This is an allowance provided to the network licencees that allows them to carry out projects to consumer vulnerability and/or deliver longer–term financial and environmental benefits for consumers.

Refuse Derived Fuel: This fuel is produced from combustible components that the industry calls Municipal Solid Waste – MSW for short. This waste, usually Ftaken from industrial or commercial sites, is shred, dried, baled and then finally burned to produce electricity. Refuse Derived Fuel is a renewable energy source that ensures waste simply isn't thrown into a landfill and instead, put to good use.

Sustainable Urban Extensions (SUEs): Sustainable urban extensions present an opportunity to deliver sustainable development whereby residential development is served by the necessary services, facilities, infrastructure, and employment opportunities to sustain a community.

Transport for the North: A partnership that brings the North's local transport authorities and business leaders together with Network Rail, Highways England, and HS2 Ltd, while working closely with Central Government. Their aim is to represent the North on transport infrastructure investment required to drive transformational growth and rebalance the UK economy.

UK Government Powering Up Britain: This paper sets out how the UK government will enhance the country's energy security, seize the economic opportunities of the transition, and deliver on the net zero commitments by powering the UK through affordable, home-grown, clean energy by ensuring Britain has among the cheapest wholesale electricity prices in Europe by 2035 and moving towards energy independence through a potential doubling of Britain's electricity generation capacity by the late 2030s.

APPENDIX C

MAPPING OF SUBSTATION DEMAND HEADROOM RED/AMBER/GREEN

Greater Lincolnshire Area
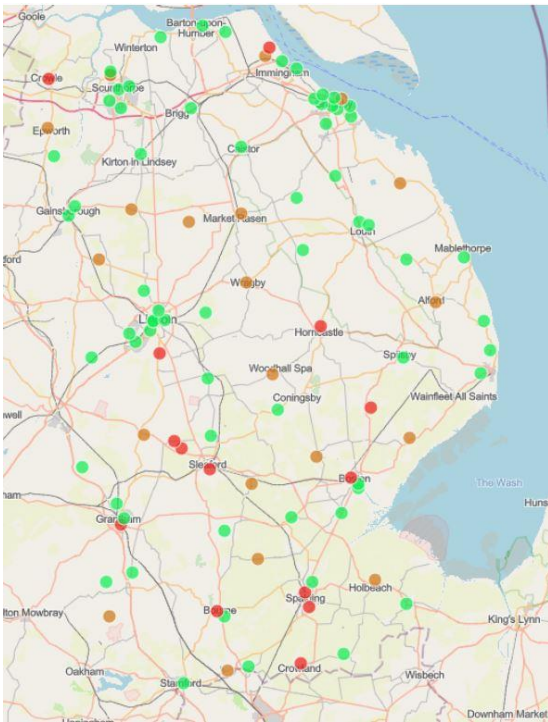
Figure 1: Baseline

Figure 2: Priority 1

Figure 3: Priority 2

Figure 4: Priority 3

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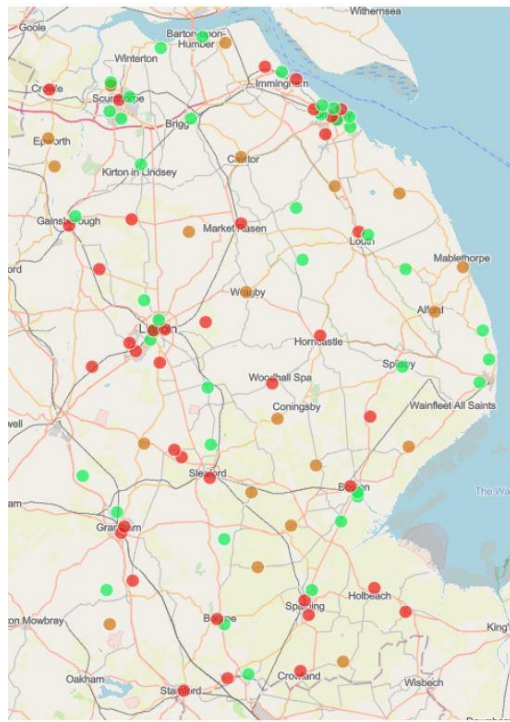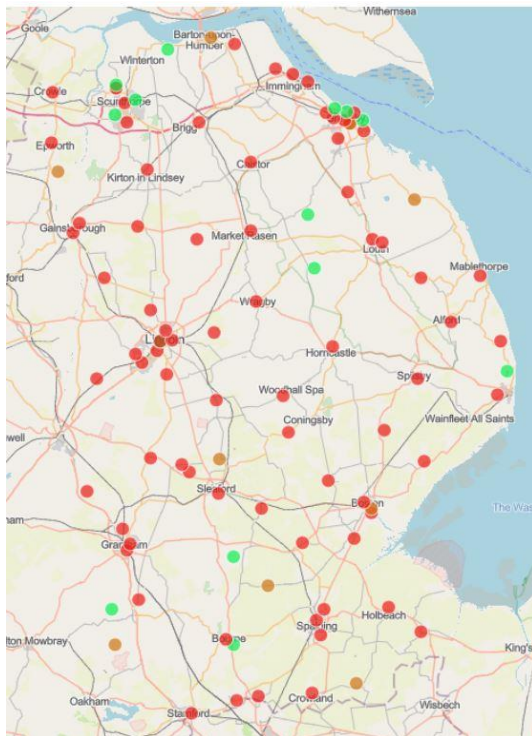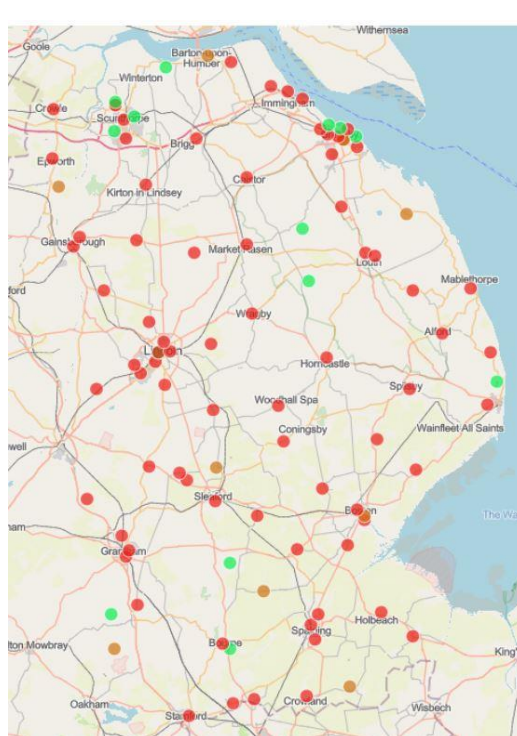
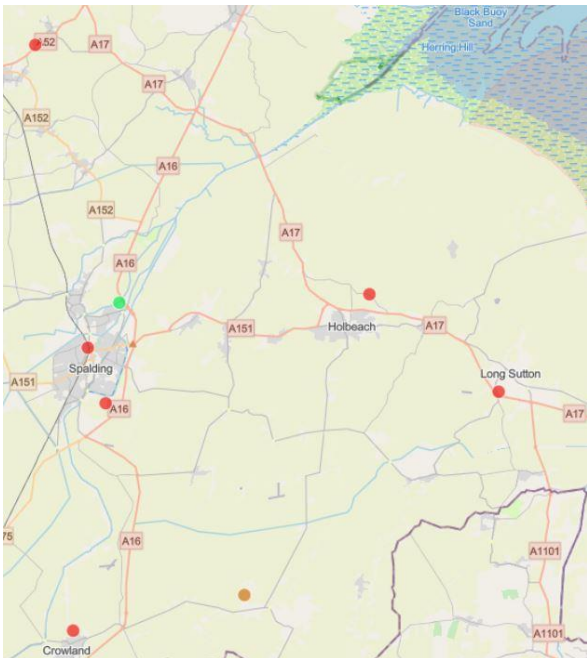**Boston District**

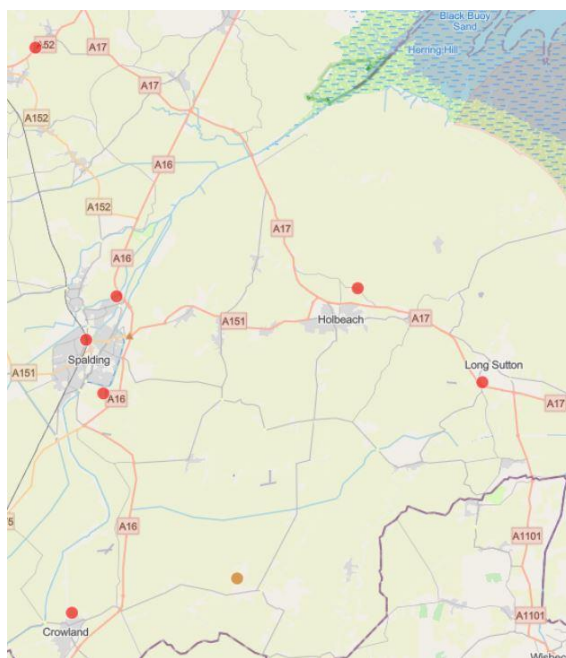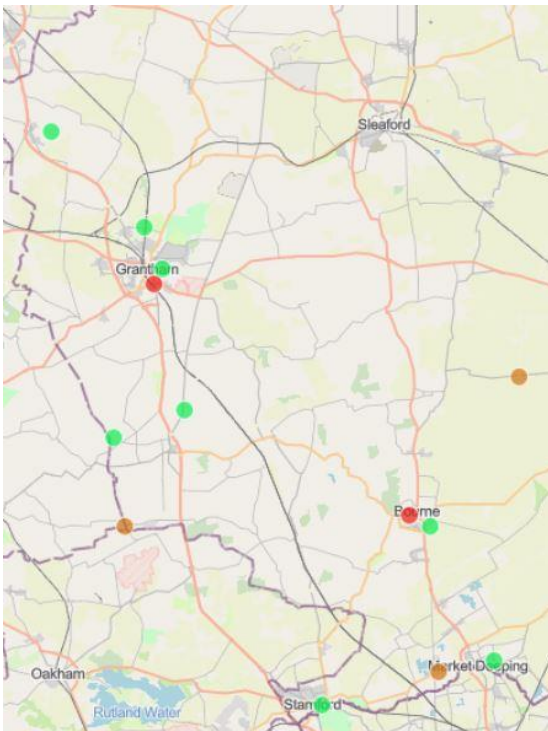Figure 1: Baseline
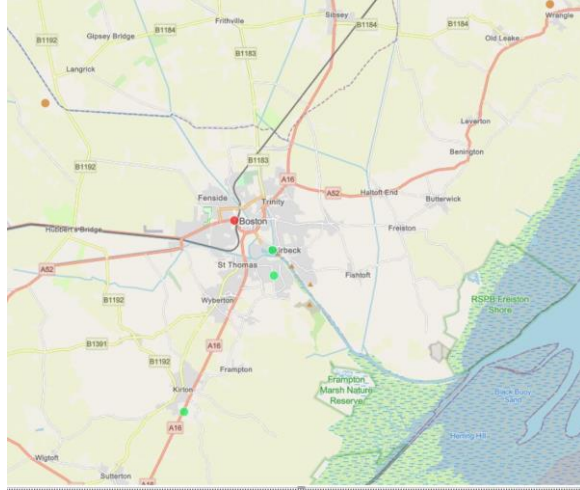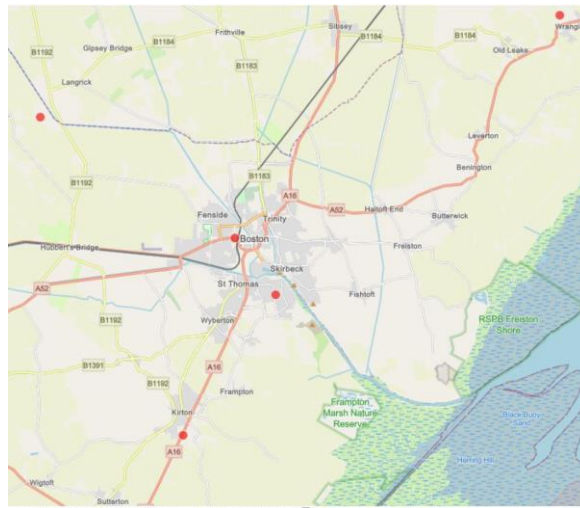
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Figure 3: Priority 2

Figure 4: Priority 3
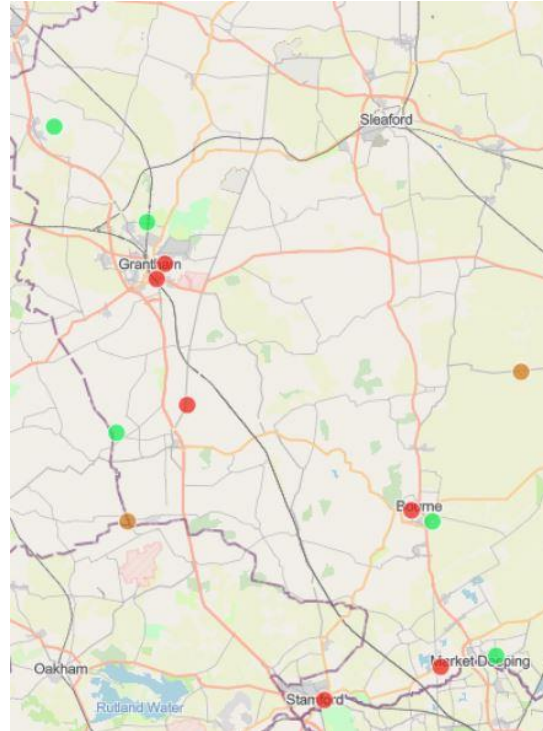
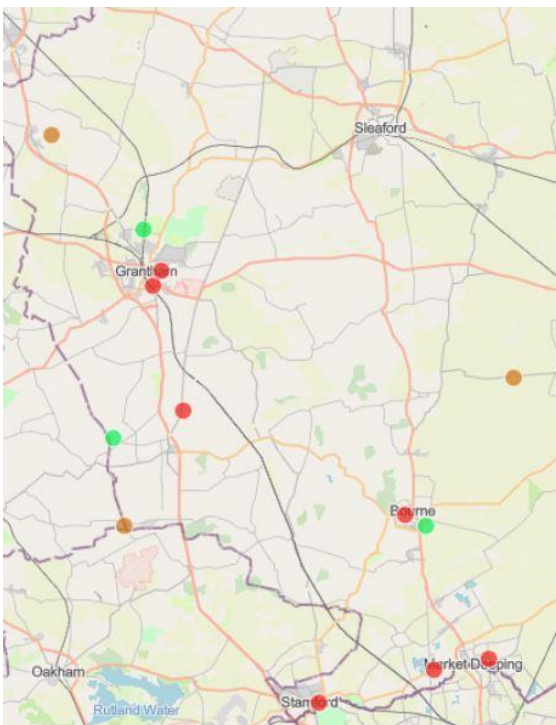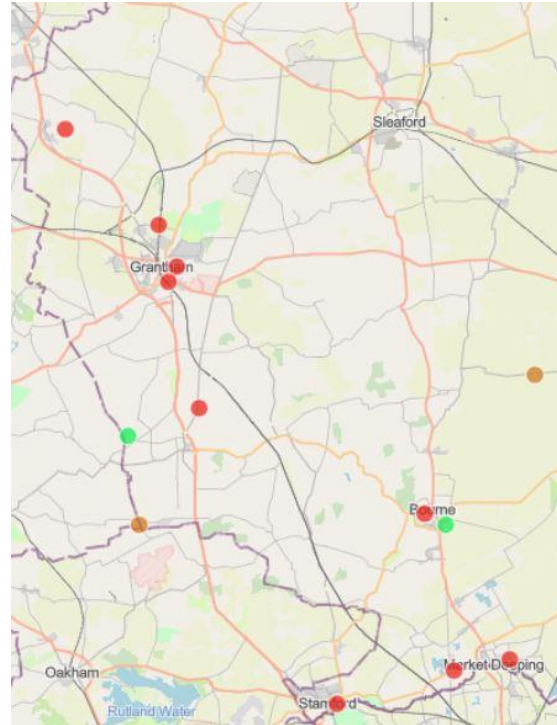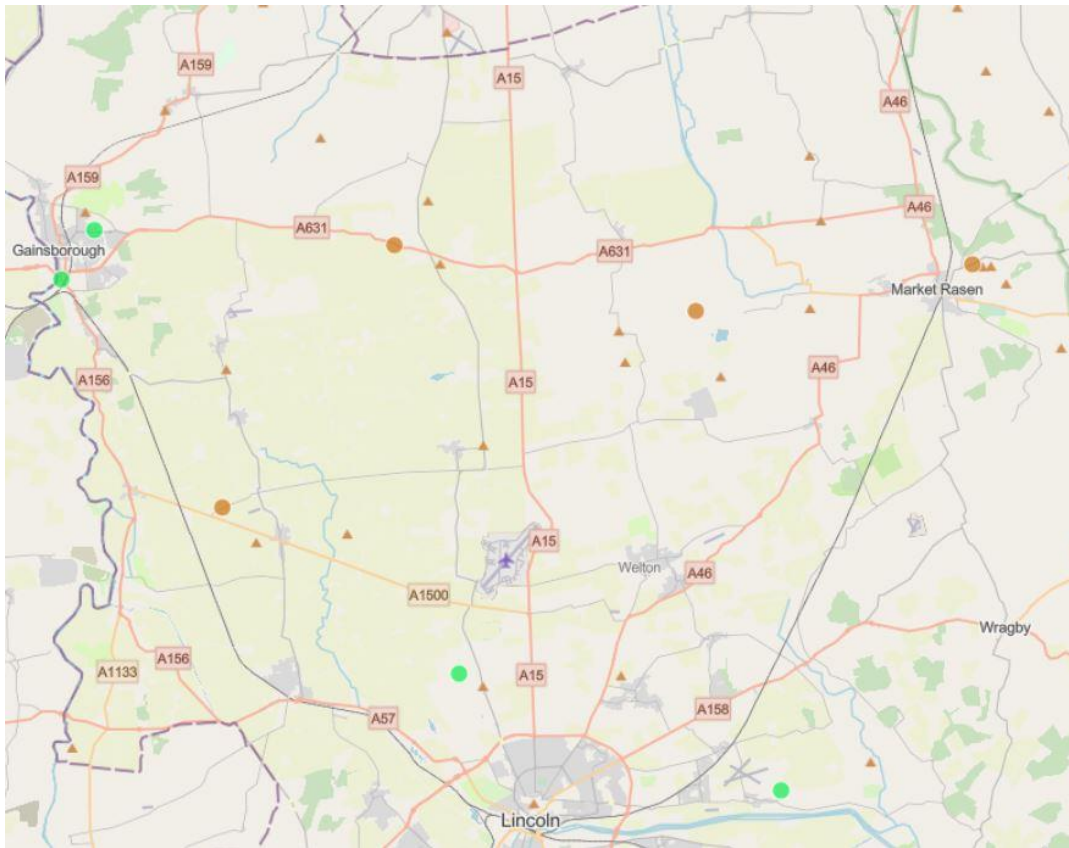Page 261
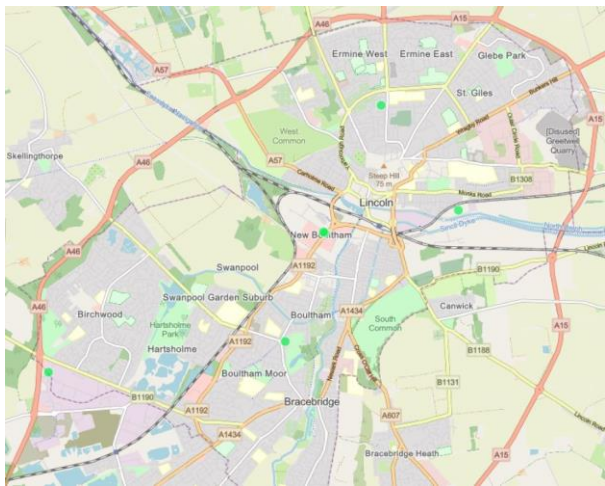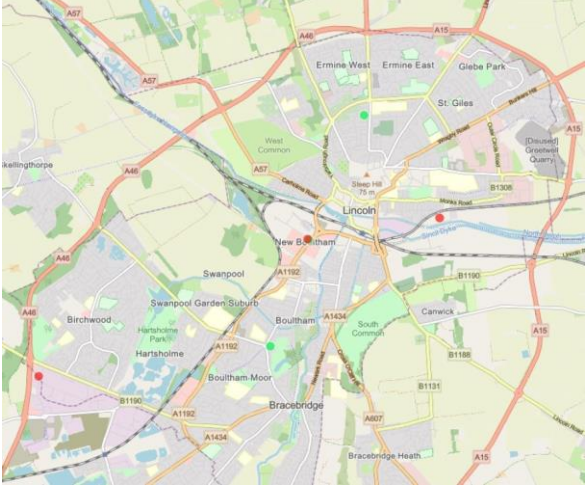
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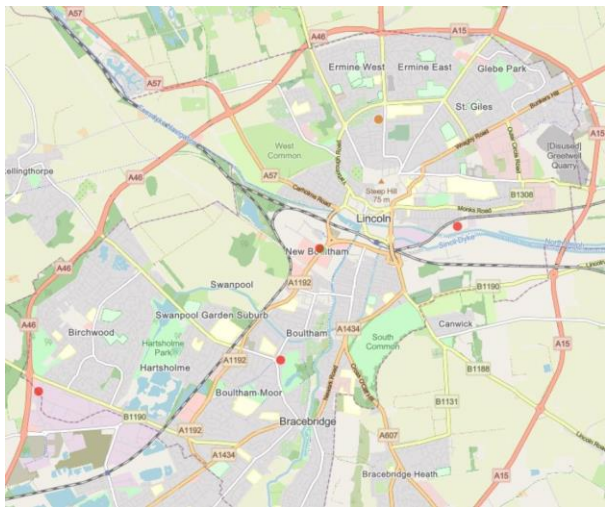
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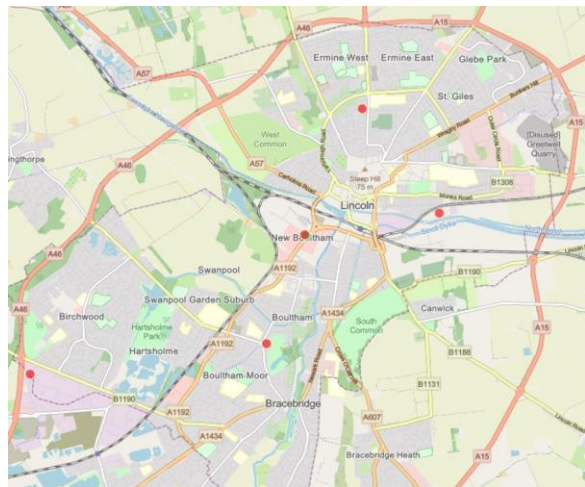
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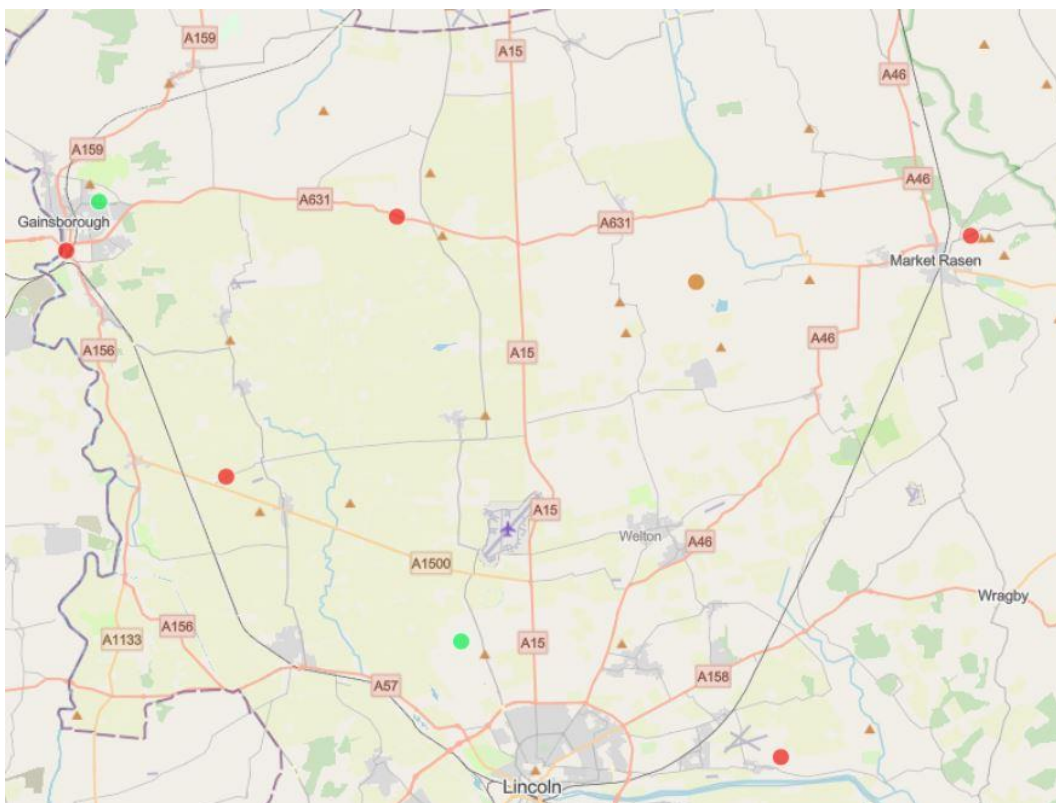

Figure 4: Priority 3

East Lindsey
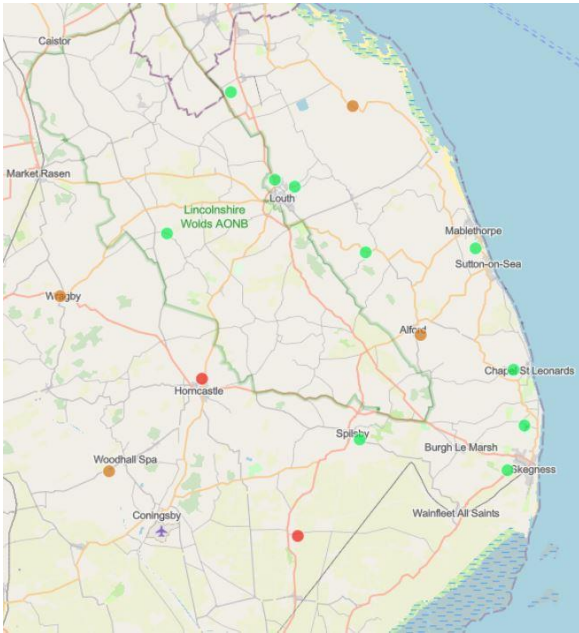
Figure 1: Baseline

Figure 2 – Priority 1

Figure 3: Priority 2

Figure 4: Priority 3

Page 263
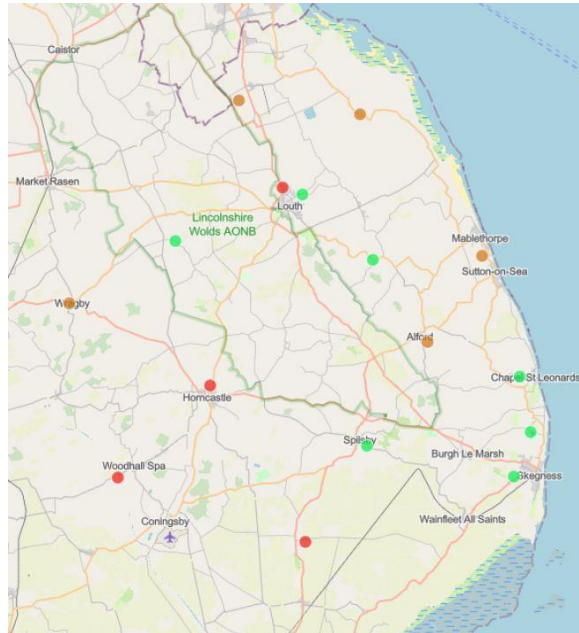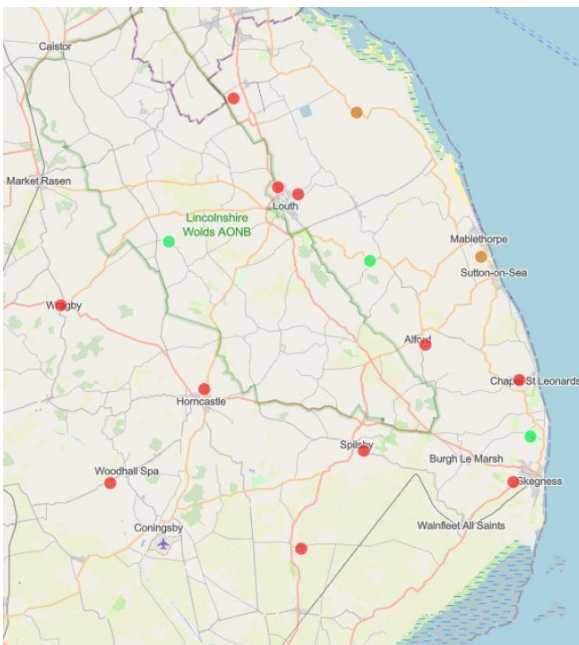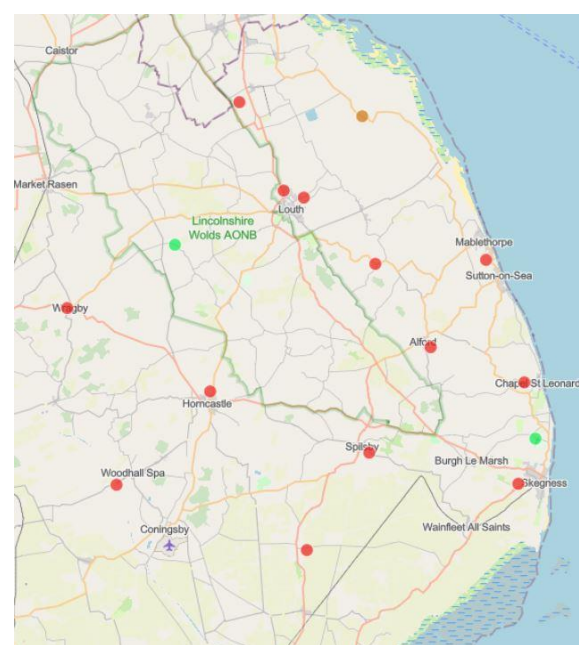
North East Lincolnshire

Figure 1: Baseline

Figure 2 – Priority 1

Figure 3: Priority 2

Figure 4: Priority 3

Page 264
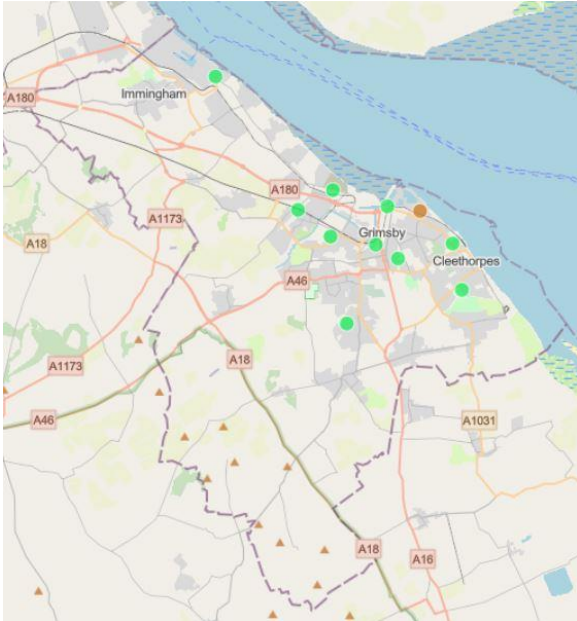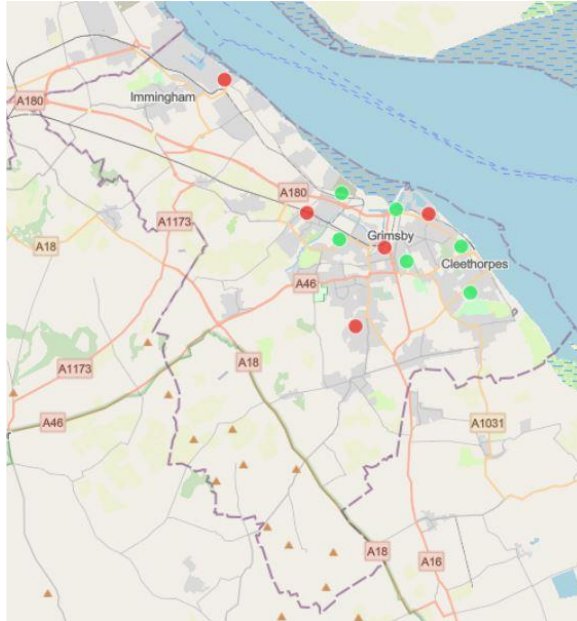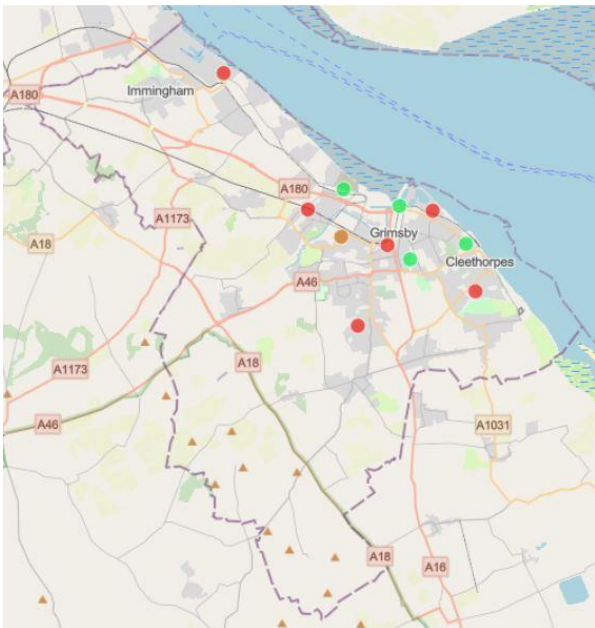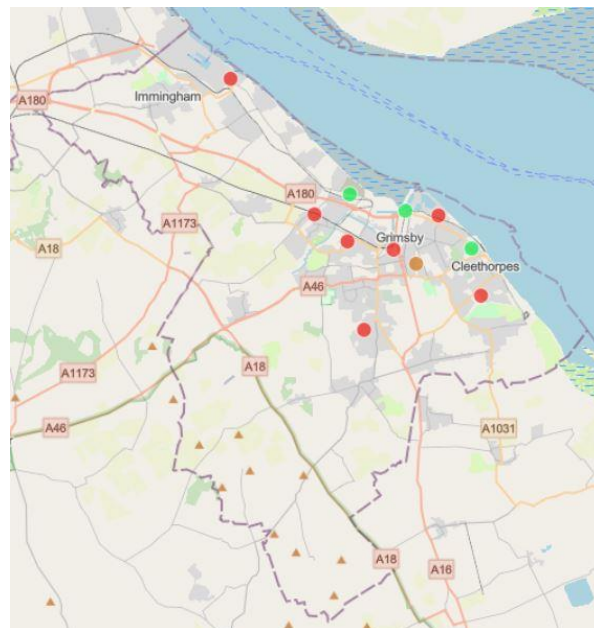
North Kesteven

Figure 1: Baseline

Figure 2 – Priority 1

Figure 3: Priority 2

Figure 4: Priority 3

Page 265
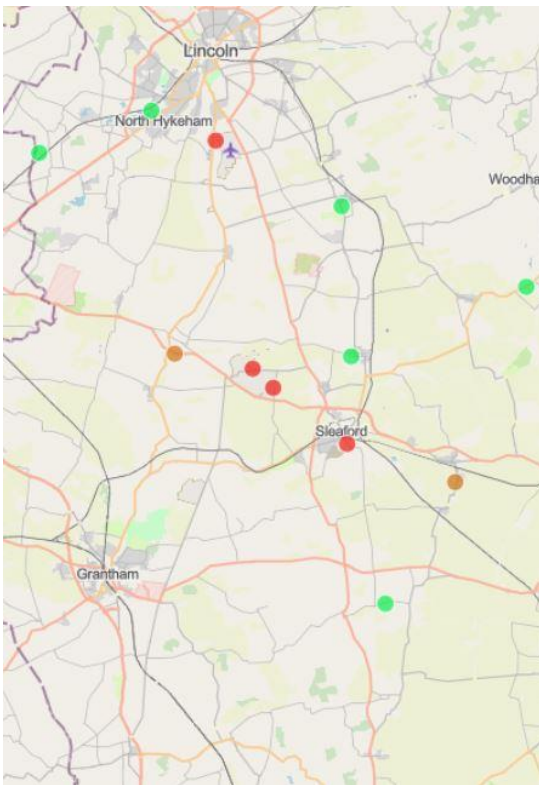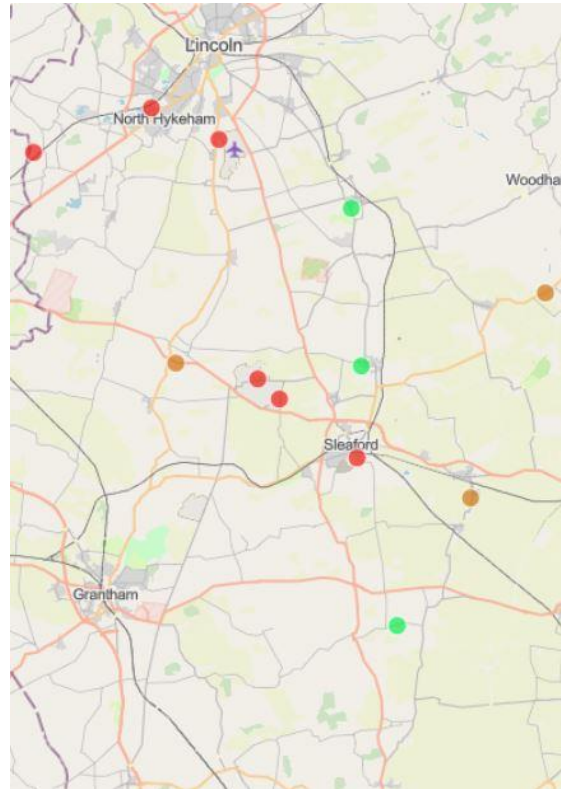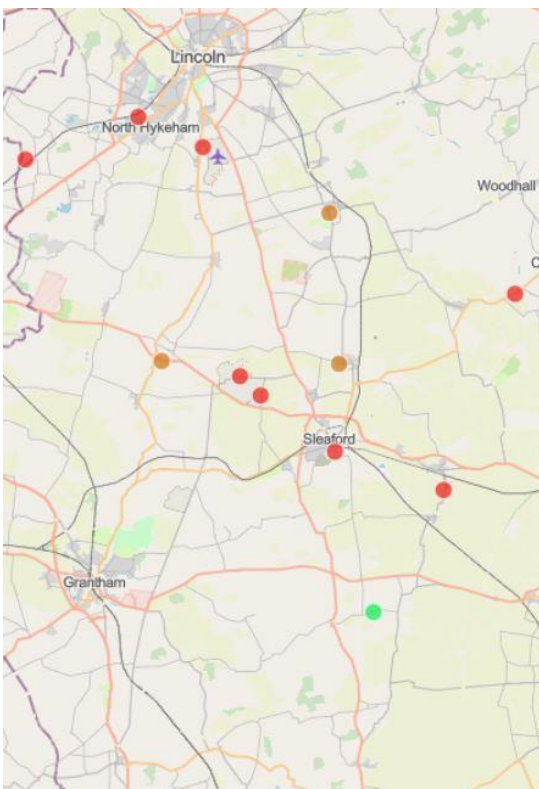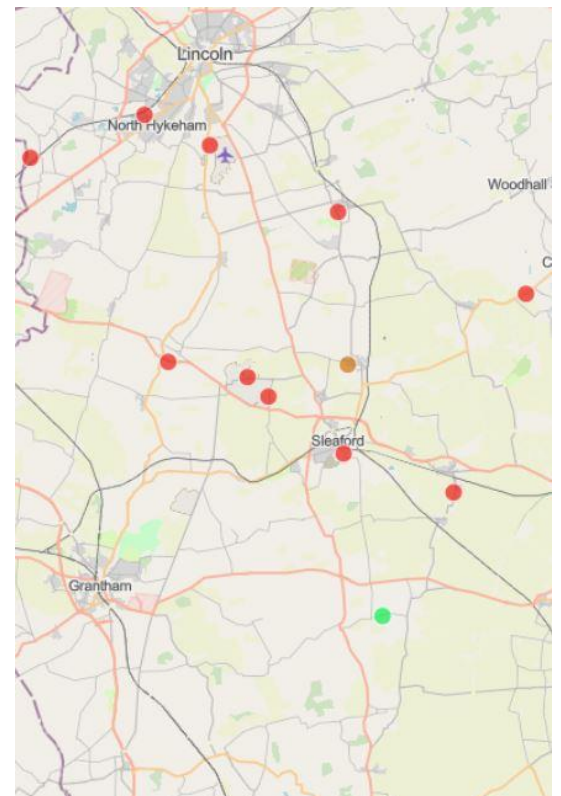
North Lincolnshire

Figure 1 – Baseline

Figure 2 – Priority 1

Figure 3 – Priority 2

Figure 4 – Priority 3

Page 267
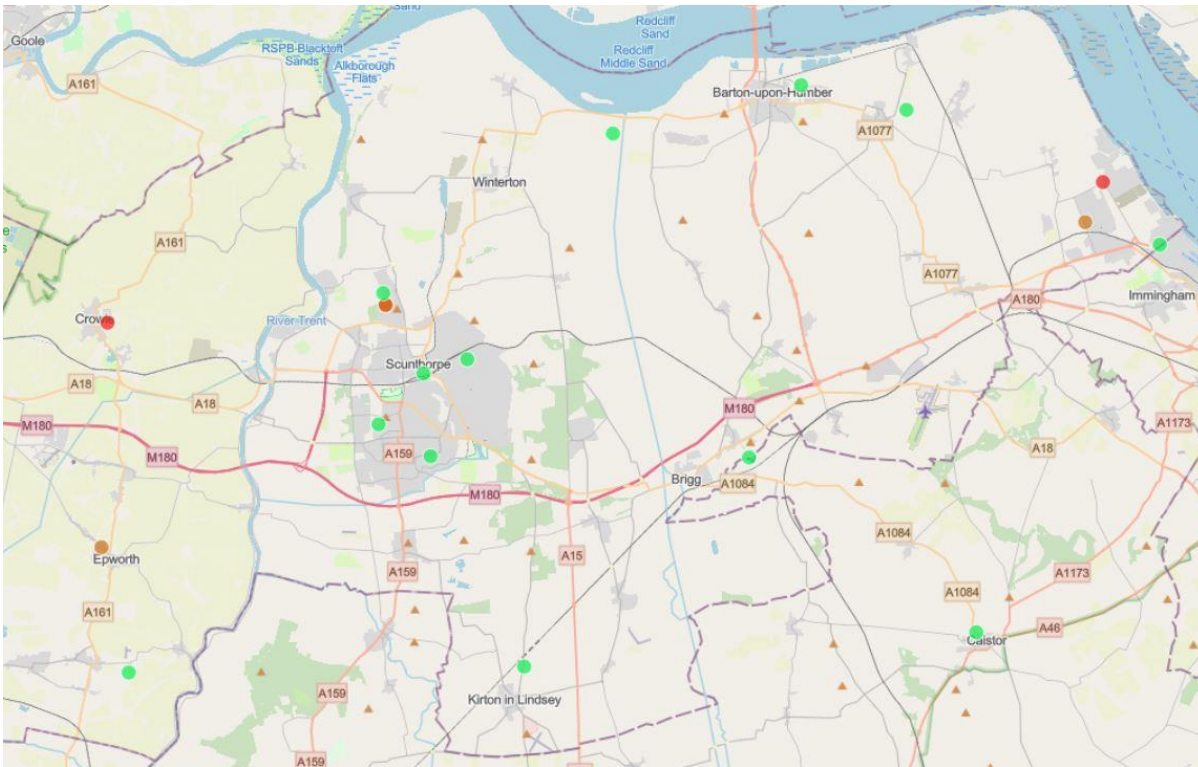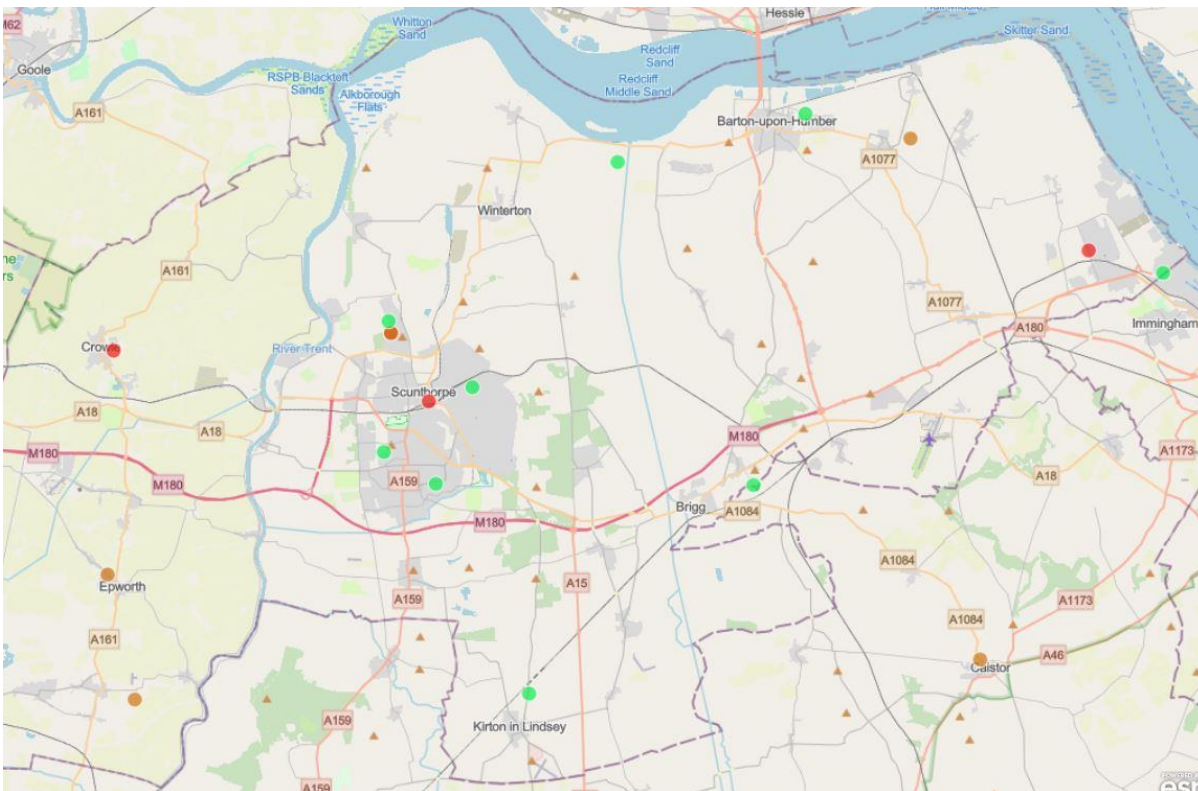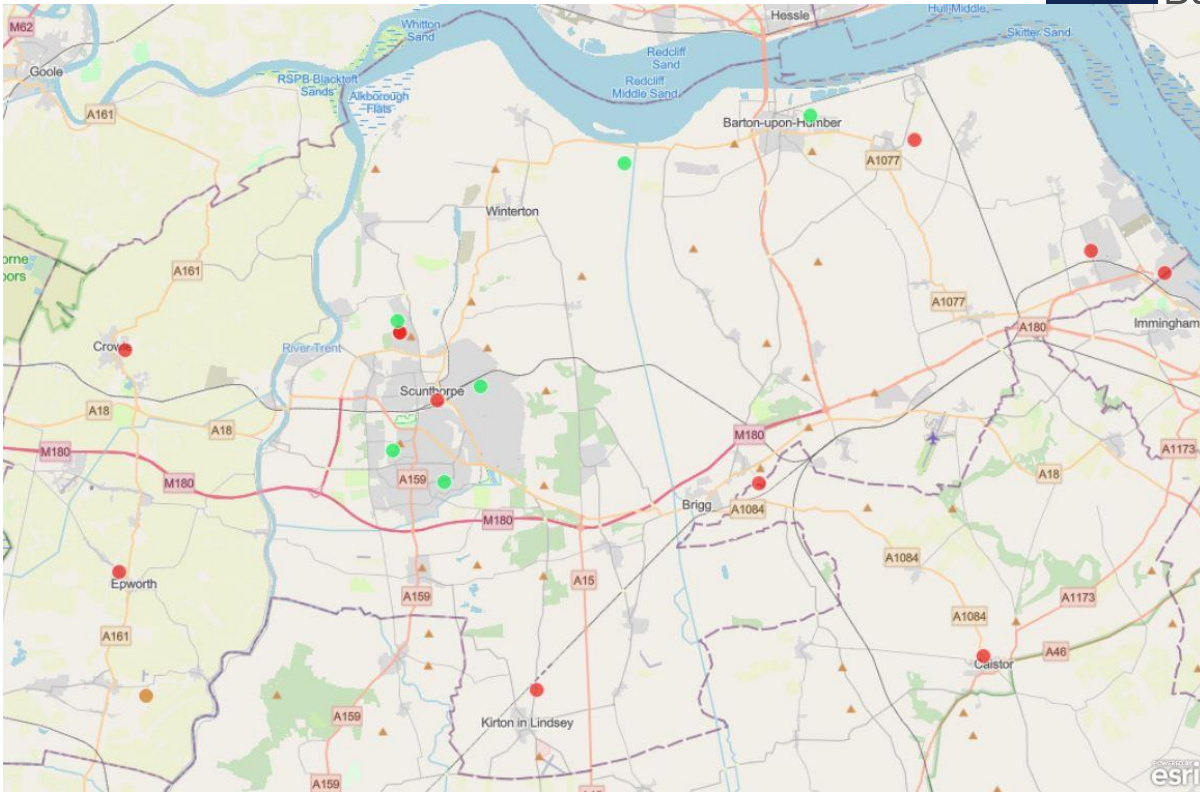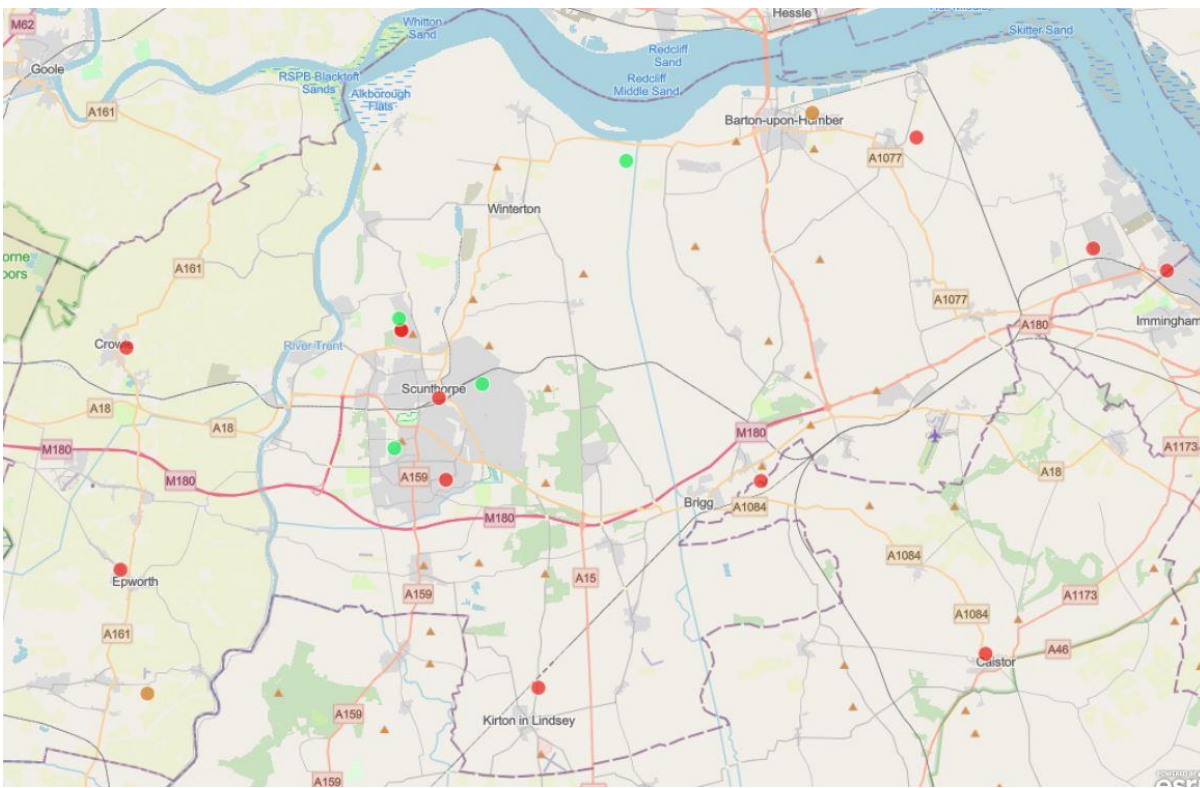
South Holland

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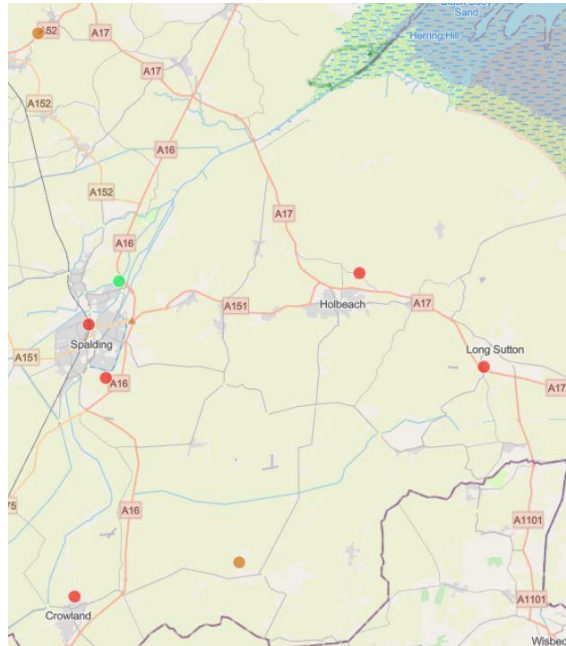
Figure 2 – Priority 1

Figure 3: Priority 2

Figure 4: Priority 3

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South Kesteven

Figure 1: Baseline

Figure 2 – Priority 1

Figure 3: Priority 2

Figure 4: Priority 3

Page 269

West Lindsey

Figure 1 – Baseline

Figure 2 – Priority 1

Page 270

Figure 3 – Priority 2

Figure 4 – Priority 3

Page 271
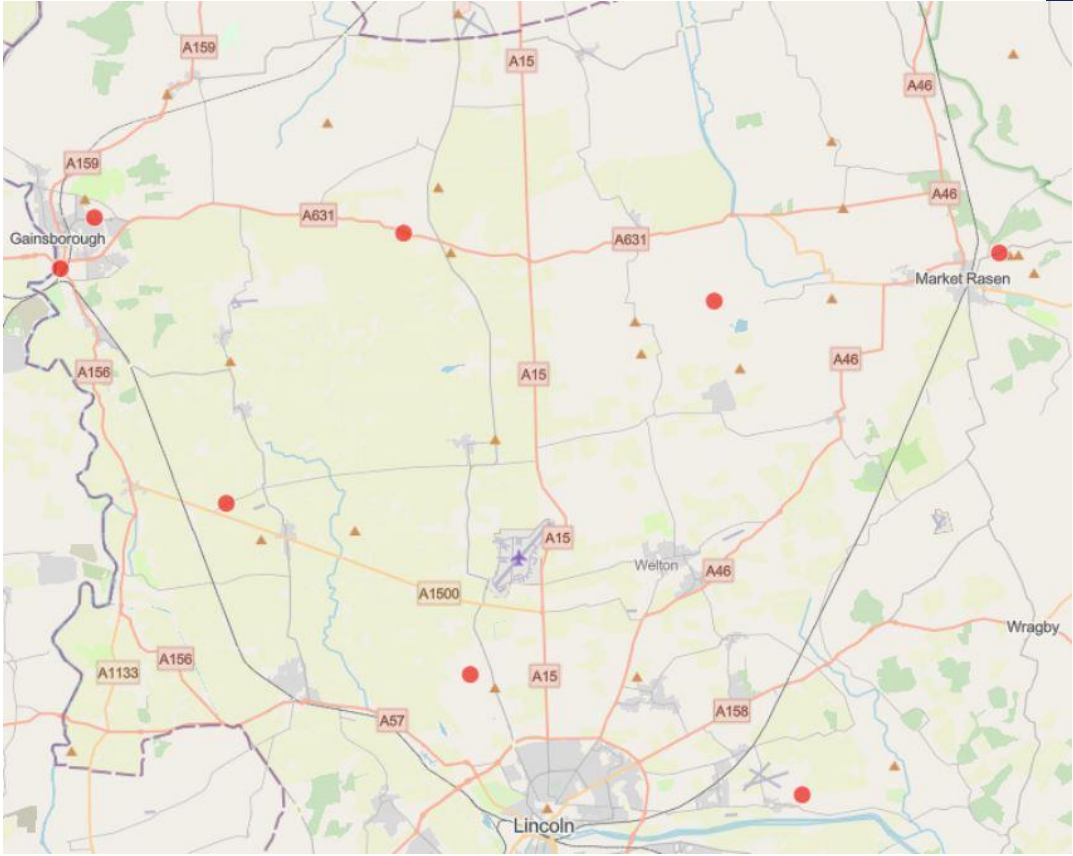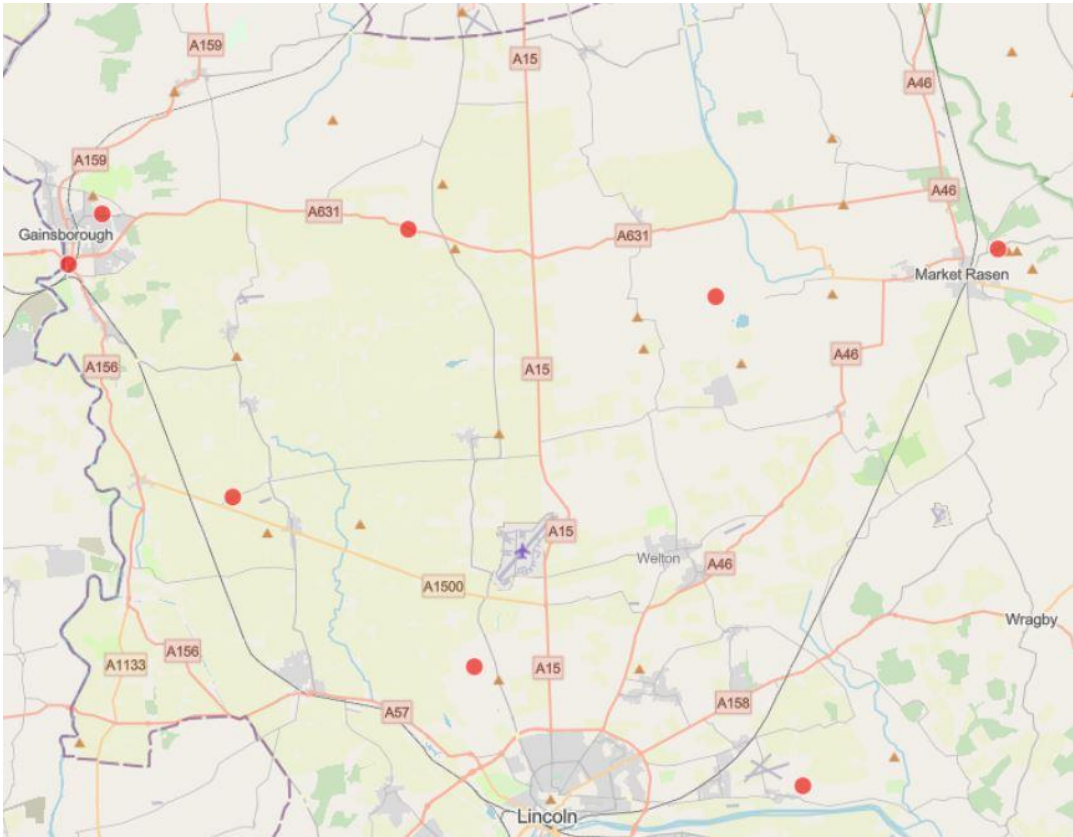
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Appendix 2 – Recommendation Table - taken from Energy Option Analysis for Greater Lincolnshire – Final Report

Theme	Recommendation	Detail	Timeframe	Investment required
Collaboration	Open Networks Insights Forum	Quarterly online forum	Short term	Capacity of appropriate resource.
	Alignment of DNO strategy across GL to ensure LAEPs are consistent	Energy management including Active Network Management. Identify targeted areas of improvement / upgrades to infrastructure to understand if there are potential case studies for energy management (including Active Network Management).	Short term	Capacity of appropriate resource to engage with both DNOs.
	Integrate aquaculture into agri-food sector energy analysis. Consider wider sector collaboration where there are known synergies e.g., logistics and transport, logistics and agri-food.	Due to the anticipated increase in transport related to agri-food and aquaculture, collaborate on transport strategies where there is anticipated increase in EV demand across combined sectors.	Medium term	Capacity of local resource. Internal or external funding to work with GLLEP to integrate energy demand from both sectors
	Creation of a Regional Future Energy Forum	The energy landscape and market are undergoing a period of rapid change and innovation whilst experiencing constraints on demand and supply. To capitalise on the opportunity of shaping the energy market in the region a private and public future energy	Medium Term	To establish what investment is required to create a Regional Future Energy Forum a decision needs to be made regarding if this will be a stand-alone group, or an enhancement of an existing group.

If a stand-alone group, additional resources will be required. |

		forum / committee, focused on demand vs supply could be developed. Need to establish remit, resources, member organisations and aim/scope of forum		
Energy transformation	Align strategic sectors' energy strategies. Develop an outline strategy for integrating geothermal into the region's long-term energy landscape.	Integrate geothermal and biomass energy projects into GLLEP Energy forum or other appropriate forum. Strategies should be integrated into LAEPs with an overarching GL wide strategy.	Short term Medium Term	Capacity of appropriate resource. Internal or external funding to facilitate strategy development
	Mapping of high intensity users in urban areas, linking industry with residential demand.	Heat network study to be undertaken. Applications to Heat Network Transformation Programme (HNTP) to be submitted.	Medium term (funding applications to be sent prior to closure of scheme in 2025)	Internal or external funding to undertake mapping exercise. Capacity of appropriate resource for funding applications.
	Shortfall feasibility studies	Identify the most suitable solution to the primary substation demand headroom restrictions, a feasibility study should be carried out for each area identified as a priority 1 shortfall.	Short term	Resource and funding to deliver feasibility studies.
	Energy public private partnership (PPP) viability study	Study to determine if an Energy PPP would be viable for GL. A key	Medium – long term	Resource to fund study, subsequent investment if deemed viable.

		area to explore would be Energy Performance Contracts.		
Innovation / Collaboration	Integration with Regional System Planners (RSPs) when / if put in place	GL local authorities engage with the new RSPs to determine accountability for regional energy systems planning.	Medium – Long term	Capacity of dedicated resource internally to engage with RSPs, Ofgem and DNOs. Potential for further investment if RSPs scope is determined to be closely integrated with local authorities.
Innovation	Undertake LAEP for all areas within GL	LAEP to identify short and medium-term actions / projects, with prioritised investment. Scope should include electricity, heat, gas, future innovations inc. hydrogen, generation and storage as well as changing built environment demands.	Short term Medium term	Short term resource from each relevant area (District, County, Unitary) to confirm boundaries. Funding to be sourced for each LAEP whether funded centrally or on a local basis.) to confirm boundaries. Funding to be sourced for each LAEP whether funded centrally or on a local basis.
	Smart Energy Skills programme	Enhance existing skills in energy sector supporting the accelerated delivery of Smart Energy Systems and attract resource into the sector through presenting the opportunity to help shape the future of energy in an innovative way.	Medium – long term	Pooled resource from GL, consider funding sources such as LCSF (Low Carbon Skills Fund) or other grants from organisations such as the DNOs.

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Open Report on behalf of Andy Gutherson, Executive Director - Place	

Report to:	**Environment and Economy Scrutiny Committee**
Date:	**12 September 2023**
Subject:	**Sutton Bridge Place Making – Scheme Overview**

Summary:

This item enables the Committee to consider and comment on the Sutton Bridge Place Making Scheme, which seeks to deliver a programme of integrated initiatives in Sutton Bridge to:

(1) Create the conditions to increase footfall between the marina and local businesses and services and increase local spend and potentially small business growth; and,

(2) add value to the scheme to extend the original 2012 moorings delivered in summer 2021, which was fully funded through the Sail the Wash initiative.

The Sutton Bridge Place Making Scheme aims to support the village by enhancing its appeal both to residents and visitors by improving the physical and visual links between the riverside, bridge, moorings, and the village centre.

Actions Required:

Members of the Environment and Economy Scrutiny Committee are invited to:

(1) review and comment on the contents of this report; and,

(2) recommend any actions to the relevant Executive Councillor for their consideration

1. Background

This project seeks to enhance the village's major assets – the river, the historic Cross Keys bridge, the riverside moorings, and its position as the gateway to Lincolnshire – and to create the conditions to increase footfall between the marina and local businesses and services and increase local spend and potentially small business growth.

It also seeks to take advantage of the area's potential for tourism, with nearby attractions such as the Sir Peter Scott Lighthouse, St Matthew's Church (the only flintstone church in Lincolnshire) and the use of the area as a practice site for the 617 Squadron in preparation for the Dam Busters raid.

In addition, it would build on the area's potential for tourism now that it is on the route of the England Coast path.

Sutton Bridge is also near The Wash. This is an area of outstanding natural beauty and is a designated European Marine Site. It is England's largest bay and contains extensive sandflats and saltmarshes which are home to a diverse habitat of marine mammals, shellfish, wildfowl, and many other migratory birds.

The 'Sail The Wash' initiative, comprising Fenland District Council, Lincolnshire County Council and the Borough Council of Kings Lynn and West Norfolk, and administered by the latter, promotes The Wash to water-based visitors. A project to extend the existing floating pontoons at Sutton Bridge, installed in 2012, was completed in 2021, delivering an additional 58 metre infill pontoon and a new 35 metre pontoon extension. This will provide further potential to stimulate activity in the area.

The proposed project has been developed with the local community, through their involvement in the project's visual design, helping them understand, appreciate, and build upon what makes the place unique. "Lessons learnt" from previous projects have been considered, such as the recent Louth Parklets scheme.

1.2 The Project

The proposed scheme consists of two inter-linked elements, supported by on-line promotional initiatives:

Pedestrian improvements – Improvements to the route for pedestrians from the riverside and moorings to the village centre. The improvements would include – new steps down from the riverbank near the bridge, a new ramp near the moorings and new dropped kerbs at all crossing points on the main road.

Public realm features – 'Perch Here'
The proposal is to create a series of features, such as perch seating, waymarkers and pedestrian signage, which aim to engage the audience with the riverside environment. These features would create a trail to encourage people to follow the route from the village centre to the riverside.

1.3 Budget
The project would require £100,000 of funding, of which a decision in principle is in place for up to £75,000 from the Council with a further £25,000 having been secured from the Sail The Wash initiative and the project has been designed to be delivered within the £100,000 limit.

1.4 Issues
LCC leases the riverbank from the Henry Smith Charity and would need its consent for any works in this area. The riverbank is also a flood defence so work in this area would require Environment Agency permission.

All permissions to carry out work in the area have been granted.

1.5 Progress

Pedestrian improvements

The Council's Technical Services Partnership (TSP) has been engaged to assist in delivering this element of the project, which would be fully funded by the Council.

TSP's initial feasibility work helped develop the details of the improvements within the indicative budget. TSP has also consulted with the local highway officer, Lincolnshire Road Safety Partnership, The Environment Agency and National Grid. In addition, local disabled and access groups have been consulted.

Public realm features – 'Perch Here'
The Council is being supported by the University of Lincoln's Transported Arts team, to deliver public realm features to be created as part of a community participation process. This element would be fully funded by an external grant of £25,000 from the Sail the Wash project.
The Transported Arts team is overseen by the Centre of Culture and Creativity at the University of Lincoln and funded by the Creative People and Places Fund. The Transported programme delivers a strategic, community-focused programme which aims to get more people in Boston Borough and South Holland enjoying and participating in arts activities.
The team has so far been engaged to deliver an initial programme of community consultation which included a series of public carving workshops during summer 2022 in the village centre. These events were very successful and attracted over 80 participants.The workshops provided 'taster sessions' which identified themes such as local history, river related subjects and wildlife.

The approach is intended to be carpentry based, not only to build on the experience enjoyed by participants of the first stage but to best capture the emerging, heritage-based themes. The proposal is to create a series of way markers and "Perch Here" seats from the initial workshops, whilst developing designs for one or more features which aim to engage the audience with the riverside environment. These features would create a trail to encourage people to follow the route from the village centre to the riverside.
The next stage of community participation would aim to re-engage previous participants as well as new ones, to be involved in fabricating elements of the final products. This is proposed to take place between January and March 2024.

The programme would then culminate in a festival-type celebration event centred around a theme unique to the area, to draw in visitors and engage local residents.

1.6 Member and public engagement

A meeting took place with Councillor J. Tyrrell on 29 March 2022 to appraise him of the project. A further meeting took place on 11 July 2022 with Councillors J. Tyrrell, C. Davie and T. Dyer to discuss progress with Cllr Tyrell updated further on 18th August 2022. Cllr Tyrell was provided with an email update on 17th August 2023.

1.7 Programme

Activity	Estimated date
TSP engaged to assist on the project	April 2022
Public engagement arts project begins in the village	July 2022
TSP complete feasibility work and start consultation	Feb/Mar 2023
LCC (TSP) detailed design and contract preparation for civils work	Feb/March 2023
Second phase of community engagement Fabrication of public realm features	Jan/Feb/Mar 2024
Construction phase start	Mar 2024
Construction phase completion	Apr 2024
Celebration event	May/Jun 2024

2. Conclusion

This project would deliver much needed improvements in a Lincolnshire village that is at the gateway to the county, enhancing the area for local businesses and services, visitors and residents.

The project would put the community at the heart of what will be delivered. This approach will ensure that the community take an active part in the scheme and have a strong sense of ownership for what is delivered.

Members of the Committee are invited to review and comment on the overview of this project and highlight any additional matters which could be considered in delivering this project within the indicative budget.

3.   Consultation

a) Risks and Impact Analysis
The major risk to the project is in delivering improvements on land leased to but not owned by Lincolnshire County Council. To mitigate this risk early consultation has taken place with the landowner (The Henry Smith Charity) and The Environment Agency and National Grid who have assets in the area of the proposed work.
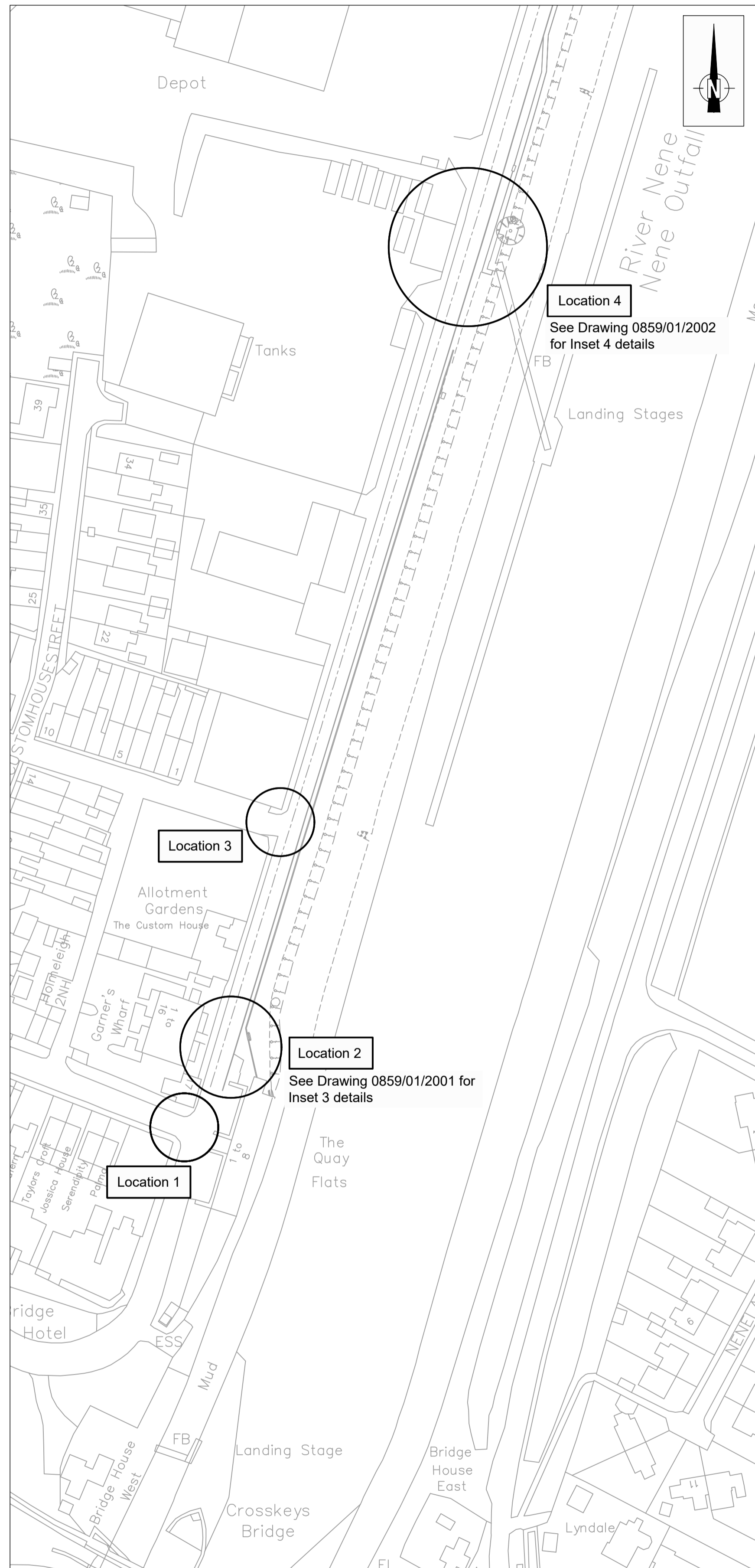
4.   Appendices

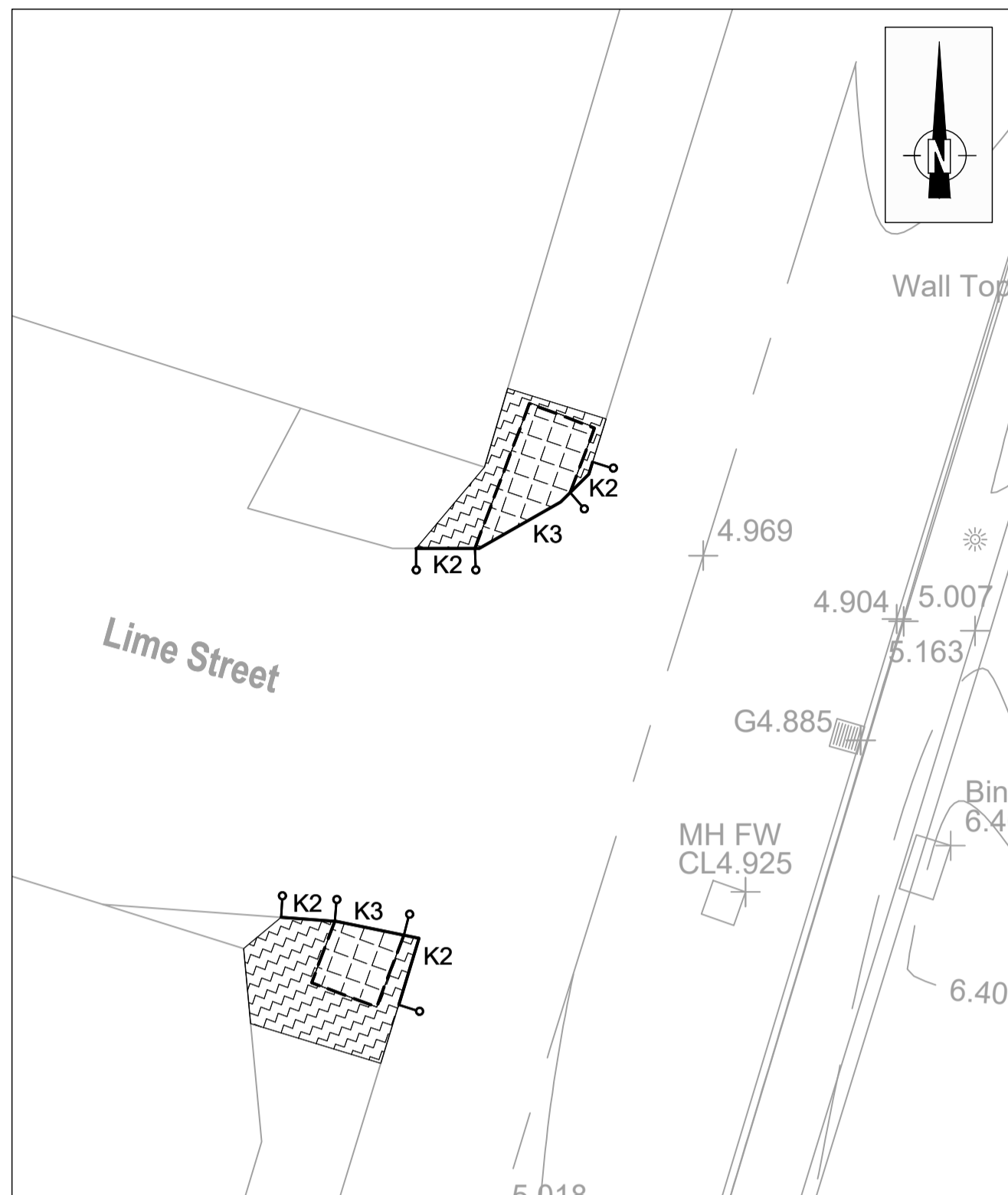| These are listed below and attached at the back of the report	
Appendix A	Plan - Footpath and roadway improvements

5. Background Papers

No background papers within Section 100D of the Local Government Act 1972 were used in the preparation of this report.

This report was written by Hayley Redford, Project Officer, who can be contacted via email at hayley.redford@lincolnshire.gov.uk.
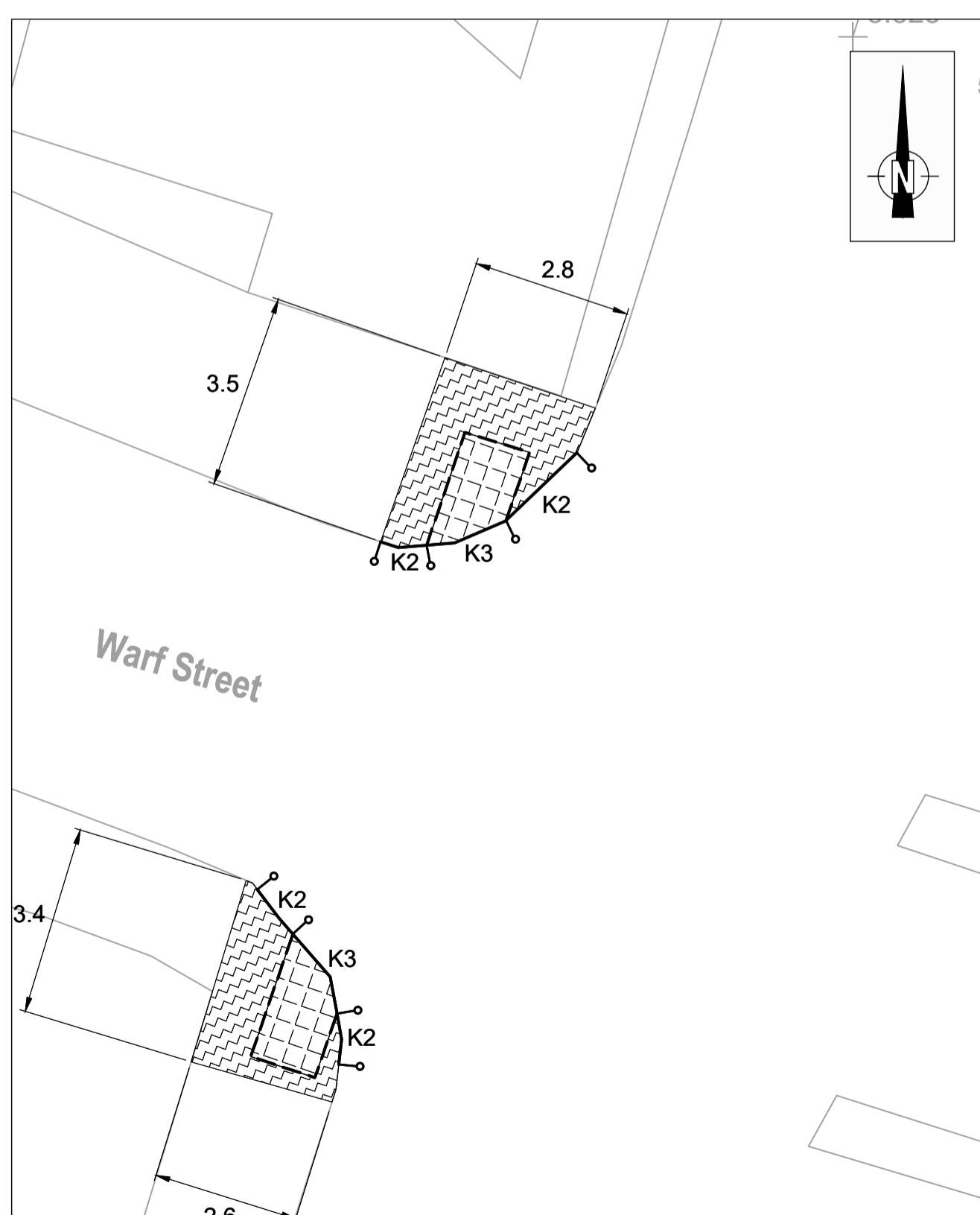
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Location Plan
Scale 1:50,000

Location
of Works

Inset Location Plan

Depot

Tanks

Landing Stages

River Nene
Nene Outfall

FB

Location 4
See Drawing 0859/01/2002
for Inset 4 details

CUSTOMHOUSE STREET

Allotment
Gardens
The Custom House

Location 3

Garner's
Wharf

Location 2
See Drawing 0859/01/2001 for
Inset 3 details

The Quay
Flats

Location 1

Bridge
Hotel

ESS

Bridge House West

Landing Stage

Bridge
House
East

Crosskeys
Bridge

Lyndale

Inset Location Plan
Scale 1:1,000

Page 283

Location 3

Lime Street

K2
K3
K2

4.969

4.904 5.007

5.163

G4.885

MH FW
CL4.925

Bin
6.4

K2 K3
K2

6.40

5.018

Location 3
Scale 1:50

Location 1

Wall Top

2.8

3.5

K2
K3

Warf Street

3.4
K2
K3
K2

2.6

Location 1
Scale 1:50

Footway Crossing Key

New footway construction to SD/11/2 comprising:
- 100mm (or 150mm for Pedestrian Crossing) Type 1 granular sub-base
- 50mm AC20 Dense Bin binder course 40/60 grade
- 25mm AC6 close graded footway surface course 100/150 grade

Break up and remove existing footway material.
- Lay Tactile paving to SD/11/06 and SD/11/12; concrete 'Dimple' blocks (unless otherwise stated) 200mm x 133mm x 60mm, laid on 30mm sand, 100mm AC20 dense binder and 150mm type 1 sub-base. Colour of blocks to be buff. Blocks to be surrounded by K5 (50mm x 150mm) precast edging kerbs.

KX Precast concrete kerbs to SD/11/2 and SD/11/26:
- Type K1 (110mm upstand)
- Type K2 Droppers
- Type K3 Dropped (6mm upstand)
Includes break up and remove existing kerbs.

- - - - Precast concrete kerbs to SD/11/2 and SD/11/26:
Type K5

Note

1. Locations of crossings to be agreed with the Site Supervisor. The contractor shall be responsible for the setting out of vertical levels.
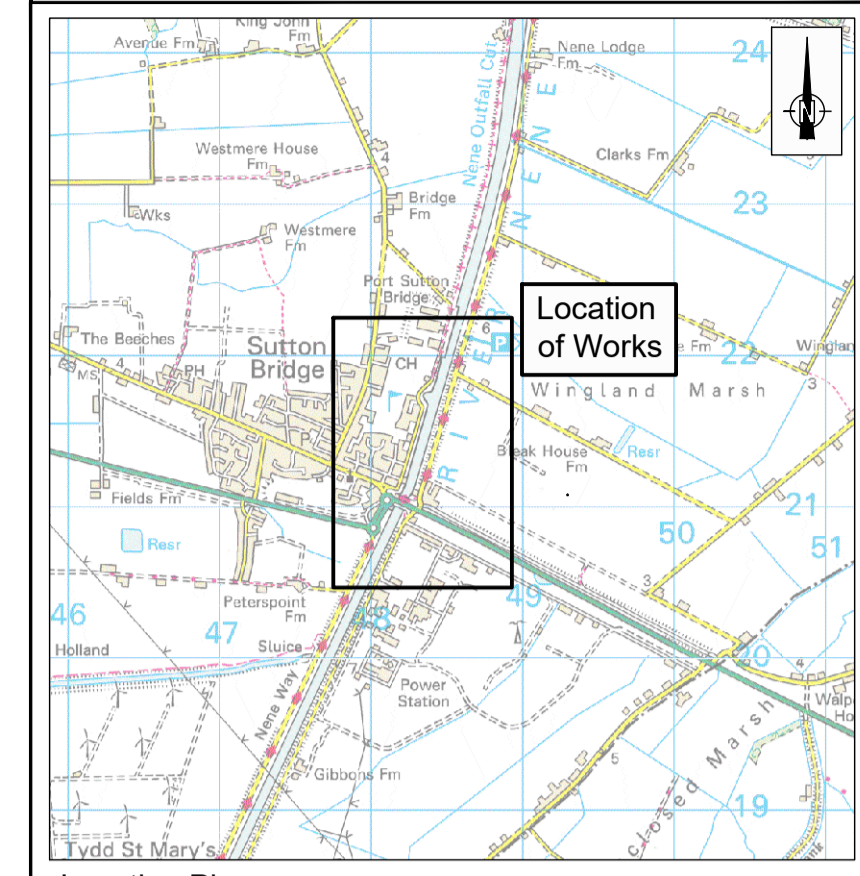
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Amendment Details						

Drawing 1st Approval

1st Approval by: AR   Date: 04/04/2023

Drawn/Designed by:	CAD Drawing Creation	
AR	Created By: MRG	Date: 13/2/2023

Scale:
(@A1)
Primary: AS
Secondary: SHOWN
(Do not scale from this drawing)

TSP, Highways
County Offices
Newland,Lincoln LN1 1YL
Customer Service Centre : (01522) 782070

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Drawing Number: 0859 / 01 / 2000   Revision Number: N/A

Alternative Scheme Code: Road No: N/A

Parish: SUTTON BRIDGE

Structure No: N/A   SCN No: N/A   Site Ref: N/A

Description:

SUTTON BRIDGE MARINA
FOOTPATH IMPROVEMENT WORKS

PROPOSED SIDE ROAD CROSSINGS

Appendix A

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Lincolnshire
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Open Report on behalf of Andy Gutherson, Executive Director – Place	

Report to:	**Environment and Economy Scrutiny Committee**
Date:	**12 September 2023**
Subject:	**Service Level Performance against the Corporate Performance Framework 2023-24 Quarter 1**

Summary:

This report summarises the Service Level Performance against the Success Framework 2023-24 for Quarter 1. All performance that can be reported in Quarter 1 is included in this report.

Full service level reporting to all scrutiny committees can be found here Service level performance data

Recommendation(s):

To consider and comment on the Environment and Economy Service Level Performance for 2023- 24 Quarter 1.

1. Background

This report details the Service Level Performance measures for the Environment and Economy Scrutiny Committee that can reported in Quarter 1.

- 2 measures that exceeded their target ☆
- 2 measures that achieved their target ✔
- 2 measures did not meet their target ✖
- 1 measure that does not have a target (contextual)

1.1 Economy

1.1.1 Measures that exceeded their target

PI 71 Amount of external funding attracted to Lincolnshire ☆

Actual £1,605,574
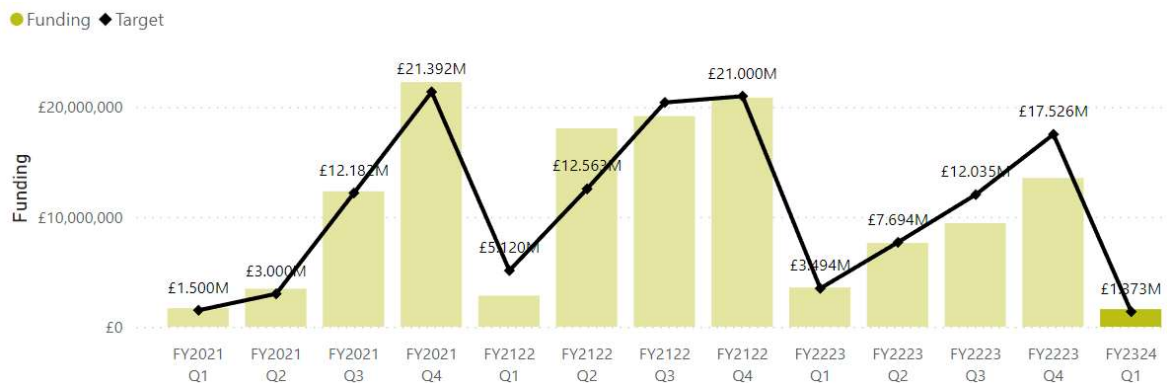**Quarter 1 Target: £1,372,643**
Annual target: £14m

A positive start to 2023-24 saw £1,605,574 external funding received which is above the target of £1,372,643.

Funding received in Q1 is broken down as follows:
• Funding of £17,190 was secured from the Department for Business and Trade (DBT) for the Business Lincolnshire Growth Hub services.

• The Sustainable Business Growth 2 programme delivered by the Business Lincolnshire Growth Hub has received £304,236 from European funds in Q1. This enabled the provision of dedicated Advisor Support, Business workshops and grants.

• The Department for Business and Trade (DBT) contribution for Q1 of £4,750 to support foreign owned businesses who are being key account managed across the region. As some Q1 payments will be received in Q2 this will bring back on target next quarter.

Further funding received during Q1 is:
• Adult Education Budget from DfE - £676,771.
• Multiply numeracy Programme - £350,727.
• Local Enterprise Partnership funding received:
o Core Funding - £250,000.
o Defence initiatives - £1,900.

1.1.2 Measures that achieved their target

PI 69 Businesses supported by the Council ✓

Actual 398
Quarter 1 Target: 364
Annual target: 1,700

Performance for Q1 has seen 398 Businesses Supported – above the target of 364.

The Business Lincolnshire Growth Hub has supported 207 businesses in Q1 with a further 39 grants being paid from the final stage of European Regional Development Fund programme.

The Growth Hub's programme for high growth businesses, 'Next Level' Scale Up programme continues to be well received during Q1 as have the Manufacturing Transformation and Supply Chain Support programmes. As Q1 saw the European funded, £7.2m, Business Lincolnshire Sustainability Business Growth 2 programme finish, work is now being undertaken to embed the replacement support programme the Business Lincolnshire Shared Service, funded through contributions of UK Shared Prosperity Fund (UKSPF) from the opted in Local Authorities. This service offers generalist and specialist advisory services as well as a range of programmes such as Start Up Support, support aimed at the Retail Leisure and Hospitality industries as well as Social Economy, Manufacturing and Carbon Reduction. This is supported by an online, on demand workshop programme and a tailored communication campaign.

Through the Inward Investment team offer which includes Team Lincolnshire (TL), inward investment enquiry handling and the account management of foreign owned businesses, our services have supported 187 businesses during Q1. Support has included attendance and investor networking at the UK Food Valley Brunch at the Lincolnshire Show.

The Economic Infrastructure Business Accommodation Portfolio consists of leasehold units in six business centres, 48 industrial workshops and eight miscellaneous premises across 24 estates in 18 towns. The overarching aim of the service is to provide suitable premises and tenancies to support new and young small and medium businesses and enhance economic growth and job creation across Lincolnshire.
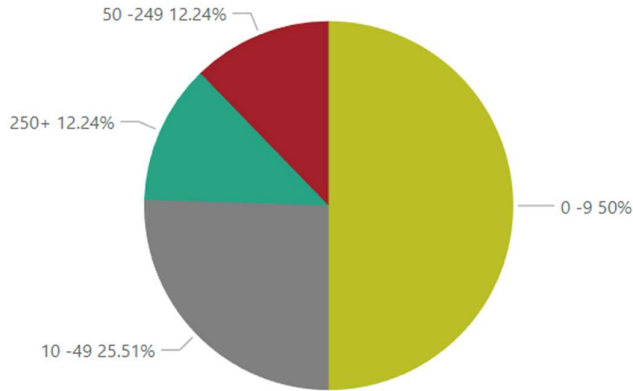
The Economic Infrastructure Portfolio team enhances that service level to its tenants, continuing to support them by nurturing through effective relationships and physical and financial support. The team also refers businesses to enable them access to advice, support, and potential upskilling from Business Lincolnshire to assist them and help them to grow.

Throughout Q1, 143 small business tenants continued to receive accommodation support alongside 5 new public sector tenants. As a result of enhanced relationship management 4 new lettings were added to the Portfolio in Q1.
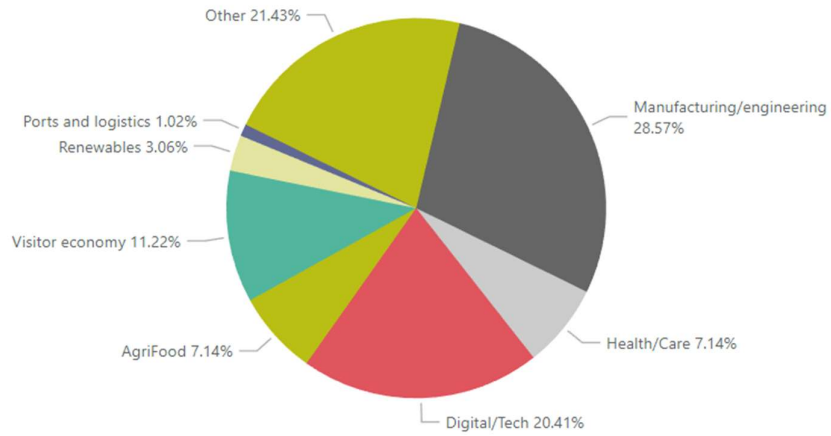
● Businesses ◆ Target

Businesses by Size

- 50 -249 12.24%
- 250+ 12.24%
- 10 -49 25.51%
- 0 -9 50%

Businesses by Priority Sectors

- Other 21.43%
- Ports and logistics 1.02%
- Renewables 3.06%
- Visitor economy 11.22%
- AgriFood 7.14%
- Manufacturing/engineering 28.57%
- Health/Care 7.14%
- Digital/Tech 20.41%

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1.1.3 Measures that did not meet their target

None in Quarter 1

1.2 Flooding

1.2.1 All Flooding PIs are reported as Measured (do not have targets)

PI 72 Flooding incidents investigated

During the period April to June 2023, 14 Section 19 Investigations were instigated following flooding to 2 commercial and 15 residential properties. Fourteen of the residential properties affected by flooding occurred within the East Lindsey District area following short duration intense rainfall as a result of a series of storms which occurred in early May. The number of investigations commenced in April to June 2023 compares to 3 investigations (concerning 1 commercial and 5 residential properties) during the same period in 2022.
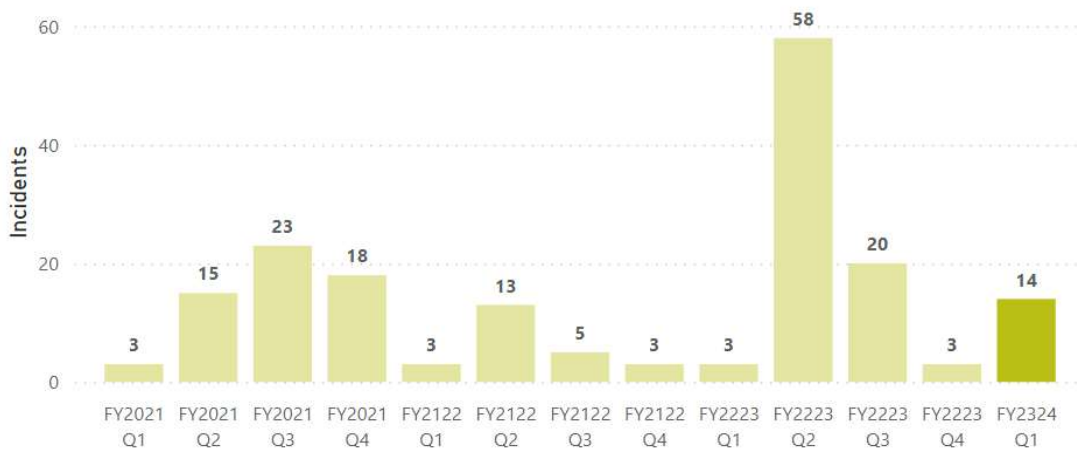
1.3 Waste

1.3.1 Glossary of terms of the waste hierarchy

All local authorities and businesses have a legal responsibility to apply the "waste hierarchy" in dealing with waste. The waste hierarchy is a simple ranking system used for the different waste management options according to which is the best for the environment. The most preferred option is to prevent waste, and the least preferred choice is disposal in landfill sites.
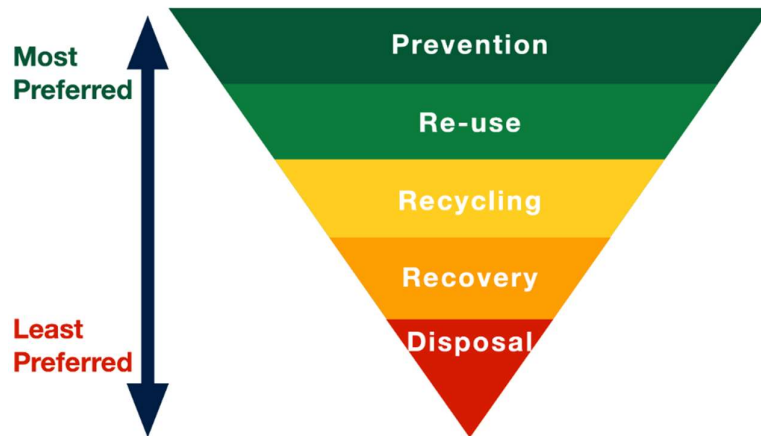
Prevention

Reducing the amount of waste which is produced in the first place is the highest priority as it helps sustain raw materials for longer which is a major objective of a Circular Economy. This can be achieved by using less material in design and manufacture and keeping products for longer. We have a KPI for the amount of "Household Waste Collected" in kilograms per household which has an annual target of 1000kg/HH. This can be affected by economic factors as people produce less waste if they spend less money but overall and is difficult to influence. However, it does show the trends in how much waste we produce.

Re-use

Preparing materials for re-use in their original form is the second best approach to dealing with waste. This can be achieved by checking, cleaning, repairing and refurbishing items. Using charity shops is a good method of reusing. In Lincolnshire we are planning to introduce a re-use process at Household Waste Recycling Centres whereby residents can present materials which is then passed onto other residents without having to recycle or incinerate.

Recycling

Recycling involves processing materials that would otherwise be sent to landfills and turning them into new products. It's the third step of the waste management hierarchy because of the extra energy and resources that go into creating a new product. We measure recycling rates for all material which is presented at Household Waste Recycling Centres where it is delivered by the public. We also measure the overall recycling rate which includes all materials including wheely bins at the kerbside and recycling centres.

Recovery

When further recycling is not practical or possible, waste can be treated through such processes as incineration or anaerobic digestion which recover energy. In Lincolnshire we operate an Energy from Waste facility which turned 57% of our waste into energy in 2020/21 which was sold as electricity to the National Grid. Material for recovery is normally collected in the black bin at each household or can be collected at recycling centres.

Disposal

When all else fails, materials that cannot be reused, recycled or recovered for energy will be landfilled. This is an unsustainable method of waste management because waste that sits in landfills can continue to have a damaging environmental impact as such sites continuously release large amounts of damaging carbon into the atmosphere. In 2020/21 we sent 3% of our waste to landfill and such material includes hazardous waste which cannot be treated and certain inert materials such as soil and rubble. Landfills can also leak chemicals and toxic liquids that can contaminate the soil and groundwater.
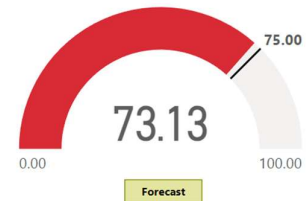
1.3.2 Quarter 1 Waste performance graphs

PI 76 Recycling at County Council owned Household Waste Recycling Centres ✗
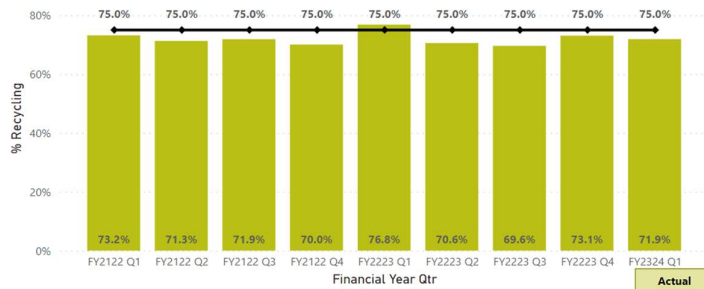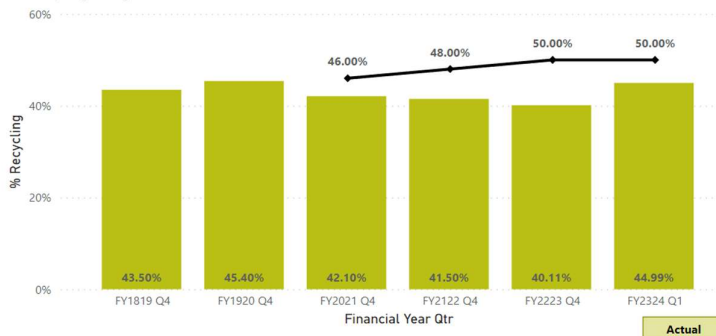

PI 160 Recycling Rate (new national formula) ✗
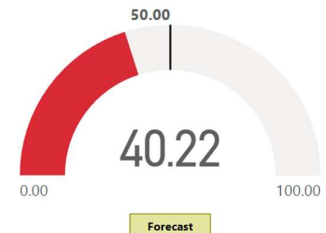
PI 162 Household waste to landfill (percentage) ☆
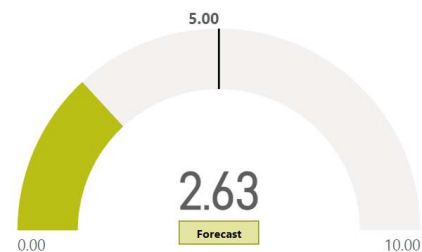
PI 161 - Household waste collected (kilograms per household) ✓

● kg per household ◆ Target

	FY1819 Q4	FY1920 Q4	FY2021 Q4	FY2122 Q4	FY2223 Q4	FY2324 Q1
Target	1,000	1,000	1,000	1,000	1,000	280
kg per household	1,008	1,012	967	991	927	275

Financial Year Qtr

Actual
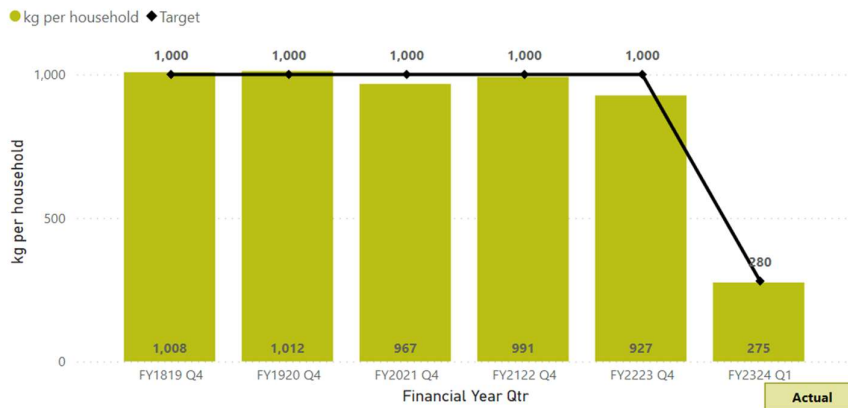
1.3.3 Quarter 1 summary of Waste performance

The recycling rate at Council HWRCs is still below target but this may be a reflection of less waste being produced. However we are exploring how other authorities have developed their re-use facilities to improve our rates.

The overall recycling rate continues to increase which may be due to many factors such as improved engagement and education but we cannot be certain. Another factor could be that more garden waste has been produced in quarter 1 which always improves this rate.

Household waste sent to landfill is well below the target as we continue to send less material to landfill which is excellent news. We have sourced extra capacity for this type of waste so we should keep well below the 5% target for the full year.

Residents are still producing less material than the target quantity which is the highest priority in terms of the Waste Hierarchy. This may be due to many factors such as wider education but economical factors may also be an influence.

2. Conclusion

The Environment and Economy Scrutiny Committee is requested to consider and comment on the report.

3. Consultation

  a) **Risks and Impact Analysis**
     n/a

4. Background Papers

No background papers within Section 100D of the Local Government Act 1972 were used in the preparation of this report.

This report was written by

- Samantha Harrison, Head of Economic Development, who can be contacted on 07920 750343 or samanthal.harrison@lincolnshire.gov.uk
- Chris Miller, Head of Environment, who can be contacted on 01522 782020 or Chris.Miller@lincolnshire.gov.uk
- Mike Reed, Head of Waste who can be contacted on 07557 169890 or Mike.Reed@lincolnshire.gov.uk

Lincolnshire
COUNTY COUNCIL
Working for a better future

Open Report on behalf of Andrew Crookham, Executive Director - Resources	

Report to:	**Environment and Economy Scrutiny Committee**
Date:	**12 September 2023**
Subject:	**Environment and Economy Scrutiny Committee Work Programme**

Summary:

This item enables the Committee to consider and comment on the content of its work programme for the year to ensure that scrutiny activity is focused where it can be of greatest benefit. The work programme will be reviewed at each meeting of the Committee to ensure that its contents are still relevant and will add value to the work of the Council and partners.

Actions Required:

Members of the Committee are invited to review the work programme and highlight any additional scrutiny activity which could be included for consideration in the work programme.

1. **Background**

Overview and Scrutiny should be positive, constructive, independent, fair and open. The scrutiny process should be challenging, as its aim is to identify areas for improvement. Scrutiny activity should be targeted, focused and timely and include issues of corporate and local importance, where scrutiny activity can influence and add value.

All members of overview and scrutiny committees are encouraged to bring forward important items of community interest to the committee whilst recognising that not all items will be taken up depending on available resource.

Members are encouraged to highlight items that could be included for consideration in the work programme.

2. Work Programme

	12 September 2023	
	Item	**Contributor**
1.	**Food Waste Disposal Contract Procurement [Pre-decision Scrutiny] (Executive Councillor Decision 18 – 22 Sept 2023)**	Mike Reed, Head of Waste
2.	**Approval to Procure Contracts for Haulage of Household Waste Recycling Centres Exit Waste Streams [Pre-decision Scrutiny] (Executive Councillor Decision 18 – 22 Sept 2023)**	Mike Reed, Head of Waste
3.	**Scrutiny Panel A – Town Centre Improvements Review Report (Executive Consideration - 3 October 2023)**	Cllr Phil Dilks, Chairman of Scrutiny Panel A Vanessa Strange, Head of Infrastructure Development Kiara Chatziioannou, Scrutiny Officer- Panel Project Lead
4.	**Energy Option Analysis for Greater Lincolnshire Final Report, Outcomes, and Next Steps**	Vanessa Strange, Head of Infrastructure Development on behalf of Mick King, Head of Economic Infrastructure Johanna Rhoades, Project Officer – Utilities
5.	**Sutton Bridge place-making Scheme**	Hayley Redford, Project Officer – Economic Infrastructure
6.	**Service Level Performance Reporting Against the Performance Framework 2023 - 2024 – Quarter 1: *Economy, Flooding and Waste***	Samantha Harrison, Head of Economic Development Chris Miller, Head of Environment Mike Reed, Head of Waste

	24 October 2023	
	Item	**Contributor**
1.	**Lincolnshire County Council Carbon Report 2022-2023**	Chris Miller, Head of Environment Dan Clayton, Sustainability Manager
2.	**Proposals for Scrutiny Reviews**	Kiara Chatziioannou, Scrutiny Officer
	Briefing reports	
3.	**Theddlethorpe Geological Disposal Facility Working Group - 6 Monthly Update –**	Justin Brown, Assistant Director, Growth

28 November 2023	
Item	**Contributor**
1. **Draft Lincolnshire Minerals and Waste Local Plan: Preferred Approach [Pre-decision Scrutiny] (Executive Decision 5 Dec 2023)**	Adrian Winkley, Minerals and Waste Policy and Compliance Manager
2. **Waste Transfer Station Improvements [Pre-decision Scrutiny] (Executive Councillor Decision 4 -8 Dec 2023)**	Mike Reed, Head of Waste
3. **Provision of Careers Advice to All Age Groups in Lincolnshire**	Thea Croxall, Adult Learning & Skills Manager Clare Hughes, Employment and Skills Executive Manager
4. **Service Level Performance Reporting Against the Performance Framework 2023 - 2024 – Quarter 2: *Economy, Flooding and Waste***	Samantha Harrison, Head of Economic Development Chris Miller, Head of Environment Mike Reed, Head of Waste

16 JANUARY 2024	
Item	**Contributor**
1. **Revenue and Capital Budget Proposals**	Keith Noyland, Strategic Finance Lead - Place, Fire & Rescue
2. **Local Electric Vehicle Infrastructure (LEVI) Pilot – Contract Procurement** EXEMPT REPORT **[Pre-decision Scrutiny] (Executive Councillor Decision 22 – 29 January 2024)**	Justin Brown, Assistant Director -Growth Tanya Vaughan, Senior Commissioning Officer Economic Investment

27 FEBRUARY 2024	
Item	**Contributor**
3. **Service Level Performance Reporting Against the Performance Framework 2023 - 2024 – Quarter 3: *Economy, Flooding and Waste***	Samantha Harrison, Head of Economic Development Chris Miller, Head of Environment Mike Reed, Head of Waste
4. **Visitor Economy Update (incl. Visit Lincolnshire & Tourism Commission Y2 & Local Visitor Economy Partnership)**	Mary Powell, Place and Investment Manager
5. **Greater Lincolnshire Internationalisation Strategy and Action Plan 2022-2024 – Update**	Angela Driver, Enterprise Growth manager
6. **Inward Investment Strategic Plan for Team Lincolnshire**	Tony Reynolds, Inward Investment Manager

16 APRIL 2024	
Item	**Contributor**
1. TBC	

28 MAY 2024	
Item	**Contributor**
1. **LCC Business Centres and Economic Development Portfolio - Performance Report**	Simon Wright, Regeneration and Portfolio Manager

09 JULY 2024	
Item	**Contributor**
2. **Adult Learning Provision 2023-24 and plans for the 2024-25 academic year**	Thea Croxall, Adult Learning & Skills Manager Jenny Riordan, Principal Officer for Learning and Skills
3. **Business Lincolnshire Growth Hub Annual Performance and Future Business Support Landscape**	Samantha Harrison, Head of Economic Development
4. **Service Level Performance Reporting Against the Performance Framework 2023 - 2024 – Quarter 4:** *Economy, Flooding and Waste*	Samantha Harrison, Head of Economic Development Chris Miller, Head of Environment Mike Reed, Head of Waste

10 SEPTEMBER 2024	
Item	**Contributor**
1. **Broadband Programme – Annual Position Report**	Stephen Brookes, Broadband Programme Manager
2. **Service Level Performance Reporting Against the Performance Framework 2024 - 2025 – Quarter 1:** *Economy, Flooding and Waste*	Samantha Harrison, Head of Economic Development Chris Miller, Head of Environment Mike Reed, Head of Waste

15 OCTOBER 2024	
Item	**Contributor**
1. TBC	

26 NOVEMBER 2024	
Item	**Contributor**
1. **Service Level Performance Reporting Against the Performance Framework 2024 - 2025 – Quarter 2:** *Economy, Flooding and Waste*	Samantha Harrison, Head of Economic Development Chris Miller, Head of Environment Mike Reed, Head of Waste

3. Items to be Programmed

Topic/Author	Est Date
Alternative Fuels	TBC
Climate Change Impact [Chris Miller, Head of Environment]	2024
Food Waste Collection- (Waiting for Env Act Updates)	Winter/Spring 2023
Green Technology Grant	TBC
Historic Places Team Strategy	TBC
Horncastle Industrial Estate extension [Mick King, Head of Economic Infrastructure & Ian Walker, Infrastructure Team Manager]	TBC
Introduction to East Atlantic Flying Way Heritage Site Bid [Chris Miller, Head of Environment] *NEW*	Autumn 2023
Lincolnshire Reservoir– Progress Updates [Matthew Harrison, Flood Manager]	Spring/Summer 2023
Local Nature Recovery Strategy (inc. Greater Lincolnshire Nature Partnership Update) [Chris Miller, Head of Environment & Dan Clayton, Sustainability Manager]	TBC
New Burdens Doctrine – Funding for Net Additional Costs	TBC
Property Green Agenda – potential guest presentation facilitated by Sustainability [Chris Miller, Head of Environment & Dan Clayton, Sustainability Manager]	TBC
Waste Performance Targets - Setting of Targets [Mike Reed, Head of Waste]	TBC
Motorhomes & Campervans Working Group – Outcomes and Recommendations [Justin Brown, Assistant Director -Growth Chris Miller, Head of Environment Samantha Harrison, Head of Economic Development]	Autumn/winter 2023

4. Conclusion

Members of the Committee are invited review and comment on the work programme and highlight any additional scrutiny activity which could be included for consideration in the work programme.

5. Consultation

a) Risks and Impact Analysis

N/A

6. Appendices

These are listed below and attached at the back of the report	
Appendix A	Forward Plan of Decisions relating to the Environment and Economy Scrutiny Committee.

7. Background Papers

No background papers within Section 100D of the Local Government Act 1972 were used in the preparation of this report.

This report was written by Kiara Chatziioannou, Scrutiny Officer, who can be contacted on 07500 571868 or by e-mail at kiara.chatziioannou@lincolnshire.gov.uk.

Forward Plan of Decisions relating to the Environment and Economy Scrutiny Committee

MATTERS FOR DECISION	DATE OF DECISION	DECISION MAKER	PEOPLE/GROUPS CONSULTED PRIOR TO DECISION	HOW AND WHEN TO COMMENT PRIOR TO THE DECISION BEING TAKEN	KEY DECISION YES/NO	DIVISIONS AFFECTED
Scrutiny Panel A: Town Centres Improvements Review [I030179]	3rd October 2023	Executive	Environment and Economy Scrutiny Committee	Scrutiny Officer, E-mail: kiara.chatziioannou@lincolnshire.gov.uk	No	All Divisions
Waste Transfer Station Improvements [I029445]	Between 4-8 December 2023	Executive Councillor: Waste and Trading Standards	Environment and Economy Scrutiny Committee	Head of Waste, E-mail: mike.reed@lincolnshire.gov.uk	Yes	All Divisions
Food Waste Disposal Contract Procurement [I029446]	Between 18 September 2023 and 22 September 2023	Executive Councillor: Waste and Trading Standards	Environment and Economy Scrutiny Committee	Head of Waste, E-mail: mike.reed@lincolnshire.gov.uk	Yes	All Divisions
Draft Lincolnshire Minerals and Waste Local Plan: Preferred Approach [I028138]	5 Dec 2023	Executive	Environment and Economy Scrutiny Committee	Minerals and Waste Policy and Compliance Manager, E-mail: adrian.winkley@lincolnshire.gov.uk	No	All Divisions

MATTERS FOR DECISION	DATE OF DECISION	DECISION MAKER	PEOPLE/GROUPS CONSULTED PRIOR TO DECISION	HOW AND WHEN TO COMMENT PRIOR TO THE DECISION BEING TAKEN	KEY DECISION YES/NO	DIVISIONS AFFECTED
Local Electric Vehicle Infrastructure (LEVI) Pilot – Contract Procurement EXEMPT [I030025]	Between 22 – 29 January 2024	Executive Councillor: Highways, Transport and IT	Environment and Economy Scrutiny Committee	Senior Commissioning Officer Economic Investment, E-mail: Tanya.Vaughan@lincolnshire.gov.uk	Yes	Birchwood; Boston Coastal; Boston North; Boston Rural; Boston South; Boston West; Boultham; Carholme; Hartsholme; Horncastle and the Keals; Skegness North; Skegness South; Sleaford; St Giles; Stamford East; Stamford West