

Our Ref: 49455/LG/MJD

Your Ref:

23 October 2018

Mr D Piper
Abel Homes Ltd
Neaton Business Park
Norwich Road
Watton
Norfolk
IP25 6JB

Dear Mr Piper

RE: Land East of A140, Horsham St Faith – Highways & Access

We refer to our instructions to consider the transport aspects for a potential residential development to the east of the A140, Horsham St Faith. The site comprises of greenfield land. The main multi-modal access will be off the road to the north of the site, hereby named throughout as Church Street, with potential emergency access, pedestrian and cycle links to the east and south into the local community. Our assessment for an access and the transportation elements for land east of A140, Horsham St Faith has been made on the potential for up to 400 dwellings.

This assessment considers current policy with regards to access for the development and accessibility, which are addressed in following matters and we present our views for proposed mitigation for the offsite infrastructure.

1. Access and off-site assessment of highways.
2. Location and accessibility to services.
3. Transportation links including pedestrian, cycle and public transport modes.
4. Development trip generation.
5. Preliminary Local Accident Analysis.
6. Possible off-site highway/transportation improvements.

The site is located to the east of A140 at Horsham St Faith with a grid reference of 621185, 314970 and an approximate postcode of NR10 3JU. The site is bound by Church Street to the north and opposite the Abbey Farm Commercial Park, with West Lane to the east and the A140 to the west. The centre of Horsham St Faith is located to the east of the site, including additional dwellings and a cycle route which is located on West Lane, see **Figure 1** attached. To the south, the site is bound by the cycle route and fields beyond.

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The civil parish of Horsham St Faith resides in rural Norfolk, within the Broadland District. Officially, the civil parish is known as Horsham St Faith and Newton St Faith, connecting the two villages within the Broadland District. Horsham St Faith and Newton St Faith hold approximately 797 households and a population of 1724 (taken from the 2011 Census data for the parish). The village is situated to the east of A140 along Church Street which stretches to Newton St Faith in the north via Manor Road. Horsham St Faith is approximately 6.4km north of Norwich city centre, 22.9km east of Dereham and 27.2km south of Cromer.

Access and off-site assessment of highways

A principle access is proposed from Church Street, which provides for adequate visibility splays, pedestrian and cycle connections from the site into the village centre, as well as potential locations for an emergency access, as demonstrated on **Drawing 49455-PP-001**.

The access parameters for the site have been considered for a development of approximately 400 dwellings. The type of access road required to serve the development is dictated by the Norfolk Residential Design Guide and is to be taken as a Type 2 road, which is 6.0m wide and would be taken from Church Street. The initial straight length of the road should be a minimum of 15m in length.

To allow for the site access and volume of traffic, the speed limit of Church Street, which is currently restricted to 60mph, is proposed to be restricted further to 40mph from the junction with the A140 to the west and the 30mph speed limit to the east. An initial design of the potential access location on to Church Street indicates that adequate visibility splays of up to 120m (for a 40mph design speed) should be available in both directions from a 4.5m setback. This will comply with the Design Manual for Roads and Bridges TD 42/95.

Church Street currently has a width of approximately 6.0m. Due to the position of the proposed access into the site and the likely trips generated by the quantum of dwellings, a ghost island right turn lane has been proposed as well as widening the existing Church Street width to allow for access into the proposed site. The road has been widened for each lane to be 3.25m wide with a 3.5m wide right-hand turn lane. According to the Norfolk Residential Design Guide, when a development is proposed to have more than 100 dwellings within the site, two site access locations are required. For this development however, it is not advised for access to be taken to the west of the site onto the A140 as this will go against Development Control Policy. An additional access could, therefore, only be taken from West Lane. However, as most trips from the proposed site are assumed to go into Norwich City Centre, all vehicles will use Church Street connecting via a more direct route to the A140, driving past the access onto Church Street. Therefore, an additional access point may not be required for this development. To compensate for this, three potential locations for an emergency vehicle access have been located from West Lane.

There are presently no footways on Church Street within the proximity of the site. A new footway / cycleway has been designed on the southern side of Church Street, linking to the current cycle route on the western side of West Lane. Three pedestrian / cycleway / potential emergency vehicle access locations to the east of the site have also been proposed, connecting the site to the existing cycleway on the west side of West Lane. All proposed cycleways and footways have been designed to allow links from the site to the amenities in the village, Horsham St Faith, as well as links to existing infrastructure – cycleways following the Northern Distributor Road to the south of the site.

Furthermore, a bus stop has been designed on Church Street to the east of the proposed access, as well as a pedestrian refuge island to allow pedestrian access to the proposed northern bus stop on Church Street. Further access to the Abbey Farm Commercial Park is made via a new crossing location further to the east. The pedestrian refuge island is vital to allow safer pedestrian access to these amenities (type and configuration to be agreed with NCC).

The proposed footways and cycleways are designed to allow for better pedestrian access to / from the site, local facilities and bus stops. The access proposal, offsite works, cycleway and footway links are provided on **Drawing 49455-PP-001**.

Location and Accessibility to Services

To assess the ability for potential residents to access services, research has been undertaken to locate the local services and facilities, which are tabulated below.

Facility/Services Table

Facility	Location	Km	Miles
School - Primary	Manor Road	1.29	0.80
School - Secondary	Hellesdon High School, Middletons Lane	4.35	2.70
Post Office	Back Street	0.48	0.30
Local Shop	Back Street	0.48	0.30
Doctors	Norwich Road	0.80	0.50
Public House	Norwich Road	0.97	0.60
Place of Worship	Church Street	0.32	0.20
Bus Stops	Church, Church Street	0.32	0.20
	Black Swan, Norwich Road	0.80	0.50
Children's Centre	St Faiths Pre-School, Church Street	0.32	0.20
Employment Zone	Abbey Farm Commercial Park	0.32	0.20
Airport	Norwich International Airport	3.38	2.10

The conclusions that can be drawn from the table are that most of the facilities and services are available in the local area. A key aim of the National Planning Policy Framework (NPPF) is to promote sustainable travel choices and accessibility to shops, jobs and other facilities whilst reducing the need to travel, especially by car.

Walking is the most important form of transport at local level and the walking offers the greatest potential to replace the car for journeys of less than 2.0km. Cycling also has the potential to replace many car trips of less than 5.0km, which may also form part of longer journeys supported by public transport.

The table above provides an indication of the distances that need to be travelled to the facilities and as a consequence the following list indicates the acceptability of the site in terms of distance, frequency of use and acceptability of need to travel.

Acceptability of Travel/Use Table

Facility	Location	Km	Likely Frequency of Use					
			Daily		Weekly		Greater than Weekly	
			Km		Km		Km	
			<5.0	>5.0	<5.0	>5.0	<5.0	>5.0
School - Primary	Manor Road	1.29	✓					
School - Secondary	Hellesdon High School	4.35	✓					
Post Office	Back Street	0.48					✓	
Local Shop	Back Street	0.48			✓			
Doctors	Norwich Road	0.80					✓	
Public House	Norwich Road	0.97					✓	
Place of Worship	Church Street	0.32			✓			
Bus Stops	Church Street	0.32	✓					
	Norwich Road	0.80	✓					
Children's Centre	St Faiths Pre-School	0.32	✓					
Employment Zone	Abbey Farm Commercial Park	0.32	✓					
Airport	Norwich International	3.38					✓	

The conclusions of the acceptability table for distance and frequency travelled indicates that most daily activities are within 2.0km of the development.

Whilst other activities and frequency usage of facilities are likely to be weekly or greater than weekly, the table shows that most are within 5.0km of the site and also less than 2km, indicating that there is a likelihood that walking and cycling could be used to travel to and from the majority of these locations.

Although the local nearest high school (Hellesdon High school) is inside of the walking and cycling boundaries, due to a lack of an appropriate route (no footways or cycleways) from the site, Norfolk County Council run a free school bus linking Horsham St Faith to Hellesdon High School.

Transportation Links including Pedestrian, Cycle and Public Transport

As stated previously local, regional and national guidance for transportation and residential dwellings advises that proposed development should be readily accessed by all sustainable modes of transport.

Considering the different modes an assessment can be made in respect of the suitability of existing infrastructure.

Pedestrians

The routes for pedestrians are currently deficient directly from the proposed site due to the lack of footway on the southern side of Church Street, limiting pedestrian movement to facilities recorded. However, all routes to the east of West Lane consist of a road with a footway on at least one side of the carriageway.

The new development will deliver a new footway / cycleway on the south side of Church Street, and two additional bus stops to the east of the proposed access. A pedestrian refuge crossing point between the additional bus stops on Church Street has also been proposed to allow access from the development to the and bus stops from the site. An additional tactile paving crossing point is also proposed near to the Abbey Farm Commercial Park for ease of access to the employment area. Three proposed footway / cycleway access points have also been designed from the site onto existing infrastructure to the east of the site on West Lane. This will not only encourage individuals from the new

development to walk to access these facilities, it also makes public transport more accessible to individuals.

An initial assessment of the routes to school (Primary School only), shows the pedestrian access route to the school could be deemed as a safe route, assuming West Lane can be accessed from the site. However, this is subject to further investigation with use of traffic flow data.

Cyclists

The bicycle has become a much more widely used mode of transport in recent years, as promoting the healthier lifestyle and the current economic circumstances that affects the population. From assessing the locations of the facilities locally, many of them are well within the 5.0km cycle distance parameters that are recognised in the industry.

The majority of the roads in Horsham St Faith are within a 30mph speed limit and provide an appropriate network for cycle use in the village to access local facilities. Further, the new cycleways implemented as part of the Northern Distributor Road to the south of the site are also accessible from the proposed site via the small road to the south of the site, onto cycleways on the eastern side of the A140. From this point, the Northern Distributor Road cycleways can be reached, or Norwich City Centre can be accessed by cycling on the road of the A140. Continuing into towards the City Centre will provide links to cycleways in North Norwich at Hellesdon. Alternatively, these routes can be accessed by cycling to Spixworth, situated to the east of Horsham St Faith.

The development is to propose three potential locations for cycleways between the site to existing infrastructure on West Lane. This increases the accessibility of local amenities from the site.

Using the Sustrans website, it appears that there are no national cycle routes within the vicinity of Horsham St Faith, therefore, cycling outside of the village is likely to be for keen cyclists only.

Public Transport

To establish criteria for public transport provision, guidance was sought from Norfolk County Council on the necessary bus service frequency. A benchmark guide to bus services can be found in the Norfolk Bus Strategy 2003/4 to 2008/9. Whilst this document is a few years old and has not been updated but does give criteria for 'Target level of service in rural areas (all offering a return journey)'.

The table indicates that for a parish population of between 1500 and 3000 the target service level should provide the following:

- Shopping service, five days a week;
- journey to work service;
- a Saturday service and;
- an evening service;

The closest stops to the proposed site are 0.32km and 0.80km from the proposed access from the site. However, as part of the development, improvements to Church Street have been outlined, proposing a new bus stop

56m to the east of the proposed access, accessible by a proposed footway and a pedestrian refuge island.

Operator	Service	Frequency
Saunders Coaches	43 Norwich City Centre - Reepham	Mon - Fri: 0937, 1101, 1301, 1411, 1501, 1734, 1804 Sat: 1130, 1350, 1530, 1735
	43 Reepham – Norwich City Centre	Mon - Fri: 0707, 0930, 1000, 1115, 1315, 1515 Sat: 0815, 1015, 1215, 1345, 1530, 1705
Saunders Coaches	44A Norwich City Centre - Sheringham	Mon - Fri: 0747, 1644, 1842, 1940, 2303 Sat: 0747, 0929, 1842, 1938, 2301 Sun: 0917, 1117, 1317, 1517, 1732, 1832
	44A Sheringham – Norwich City Centre	Mon - Fri: 0727, 1605, 1839, 2209 Sat: 0656, 0736, 1649, 1839, 2209 Sun: 0821, 1021, 1221, 1421, 1636

(All main stop details included)

The bus company Saunders Coaches use bus stops on Church Road and Norwich Road for all services listed above. The stops include the Church and the Black Swan.

Services are frequent and offer good commuting and social facilities to the residents requiring access to them. The accessibility of the buses may also encourage more individuals to use public transport, rather than using their cars. Furthermore, there are sufficient footways to reach the bus stops along with a proposed pedestrian refuge in the centre of Church Street to aid pedestrian crossing to reach the proposed bus stop on the northern side of Church Street, to the east of the proposed access. Footways are also available to access existing bus stops on Church Street and Norwich Road.

Overall, accumulatively, the bus timetables meet the Norfolk County Council village requirements for Horsham St Faith in terms of public transport availability and frequency.

Development trip generation

If it is assumed the key areas of employment are Dereham, Wymondham and Norwich, this would amount to approximately 75% of this traffic, which would travel towards the west and south via the A140. Therefore, it is assumed that 75% of the traffic would travel away from the village centre.

The TRICS database has been used to estimate the likely trip generation of the development proposal. The selection was made for houses privately owned for sites in England excluding the Greater London area. The TRICS report for weekday multi-modal trip rates is attached with this document. The trip rates for vehicular trips, including forecast vehicular trip generation, are shown in the table below.

Vehicular Trip Rates & Trips	AM Peak		PM Peak		12 Hour	
	Arrivals	Departures	Arrivals	Departures	Arrivals	Departures
Private Dwellings Trip Rate (1 Dwelling)	0.124	0.387	0.355	0.170	2.311	2.332
Total Trips (400 Dwellings)	50	155	142	68	925	933

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Preliminary Local Accident Analysis

Along Church Street in the vicinity of the site, there has been one slight and one serious accident within the last 5 years (2013 – 2017), the latest being February 2015 – which is the slight accident. Three additional accidents are located at the A140 / Church Street junction, to the northwest of the site boundary. All three accidents were reported as slight, with the latest happening in January 2016, before the opening of the Northern Distributor Road. None of the identified accidents involved pedestrians or cyclists. This initial assessment suggests the site is not a high-risk accident area and the road will not require any additional traffic calming measures to prevent accidents. All information collected from publicly available data (viewable via www.crashmap.co.uk).

Possible off-site Highway/Transportation Improvements

With the addition of a pedestrian refuge island to the east of the proposed site access and footway / cycleways to access the facilities in Horsham St Faith, it is concluded that in terms of vehicular access and accessibility to services, the site meets a satisfactory level to deliver a suitable access, pedestrian and cycle links. The allowance for an emergency vehicular access also improves the suitability of the proposed site.

A preliminary analysis of the capacity of traffic at the A140 / Church Street junction using data from the Northern Distributor Road, Application for Development Consent Order Document Ref 5.6 on traffic data indicates that the junction may be nearing capacity. However, local observations do not indicate a high level of delay at the junction, but this will need to be analysed as part of a Transport Assessment if the site progresses to a Planning Application.

Conclusions

To collate the issues and highlight the matters that are relevant to transportation for the proposed development at Church Street, Horsham St Faith, the following table shows the summary of benefits that this scheme includes:

Summary Table

Matters	Comment	Satisfactory	Needs some Upgrade	Not Satisfactory
Site Access	A satisfactory access with necessary visibility can be achieved subject to speed limit reduction. Church Street directly north of the site will require upgrading to be wider and include a ghost island right turn lane			
Local Junction Assessment	Based on a ghost island right turn lane junction and estimated traffic flows from the site, the access is unlikely to have capacity issues. Traffic data to be ascertained for Church Street / A140 junction to confirm if a ghost island right turn lane is adequate to support future dwellings.			
Accessibility to Services	A high proportion of daily and weekly services can be accessed by pedestrian, cyclists or public transport routes at less than 2.0km with proposed footways / cycleways.			
Pedestrian Links	Good site routes to schools and facilities (upon additional footway and pedestrian refuge implementation on Church Street)			
Cycle Facilities	There is no specific route in the village however there is a 30/40mph speed limit proposed between the site and local facilities, including cycleways to connect to existing infrastructure.			
Public Transport	The current public transport provision does meet the NCC targets. New additional bus stops will be needed on Church Street.			

It is therefore concluded that in terms of vehicular access, accessibility to services, other modes of transport, the site meets all the necessary criteria.

In summary, the development, which will likely generate a high level of vehicle trips but is compensated for by the proximity of the Northern Distributor Road in the peak hour towards/through the village centre, shows how, with offsite pedestrian improvements the generated traffic can be mitigated.

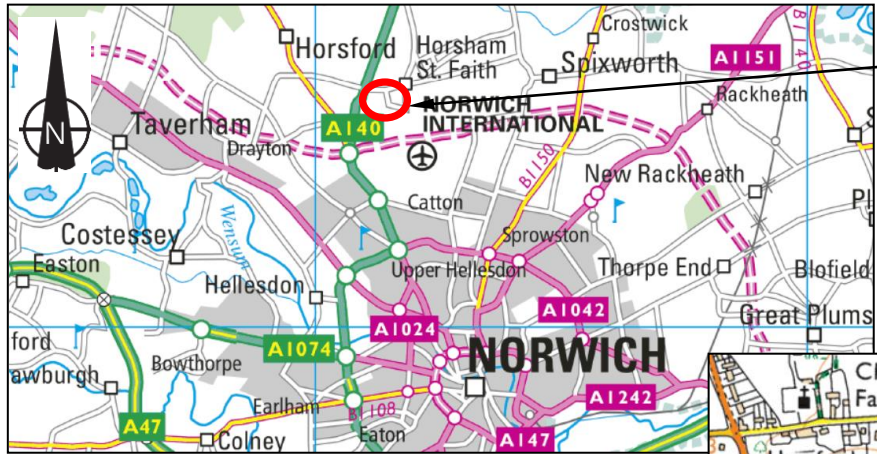
I trust the foregoing is satisfactory, but if we can be of further assistance, please do not hesitate to contact us.

Yours sincerely,

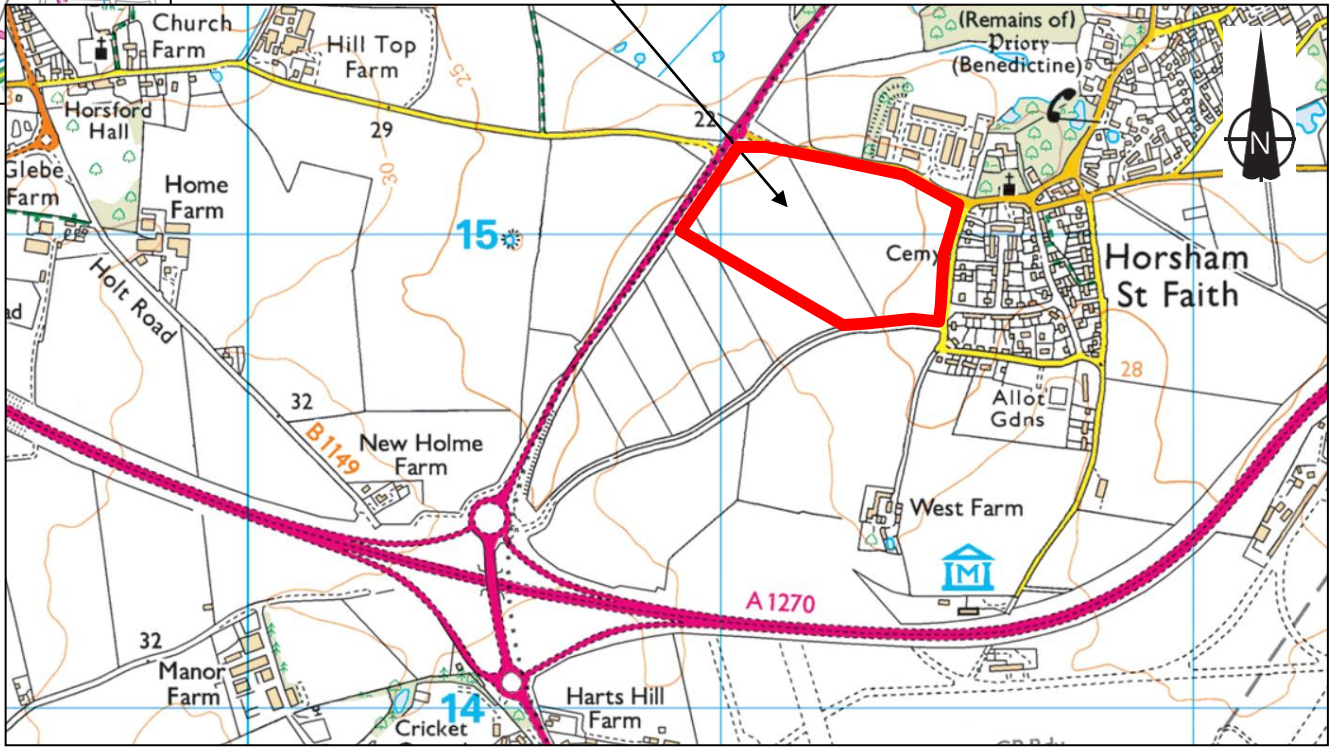
Prepared by Lauren Gray
on behalf of Richard Jackson Ltd

Checked by Martin Doughty (Director) – BEng (Hons), CEng, FICE, FCIHT, MAPM
on behalf of Richard Jackson Limited

Encs – Figure 1
Drawing 49455-PP-001



THE SITE



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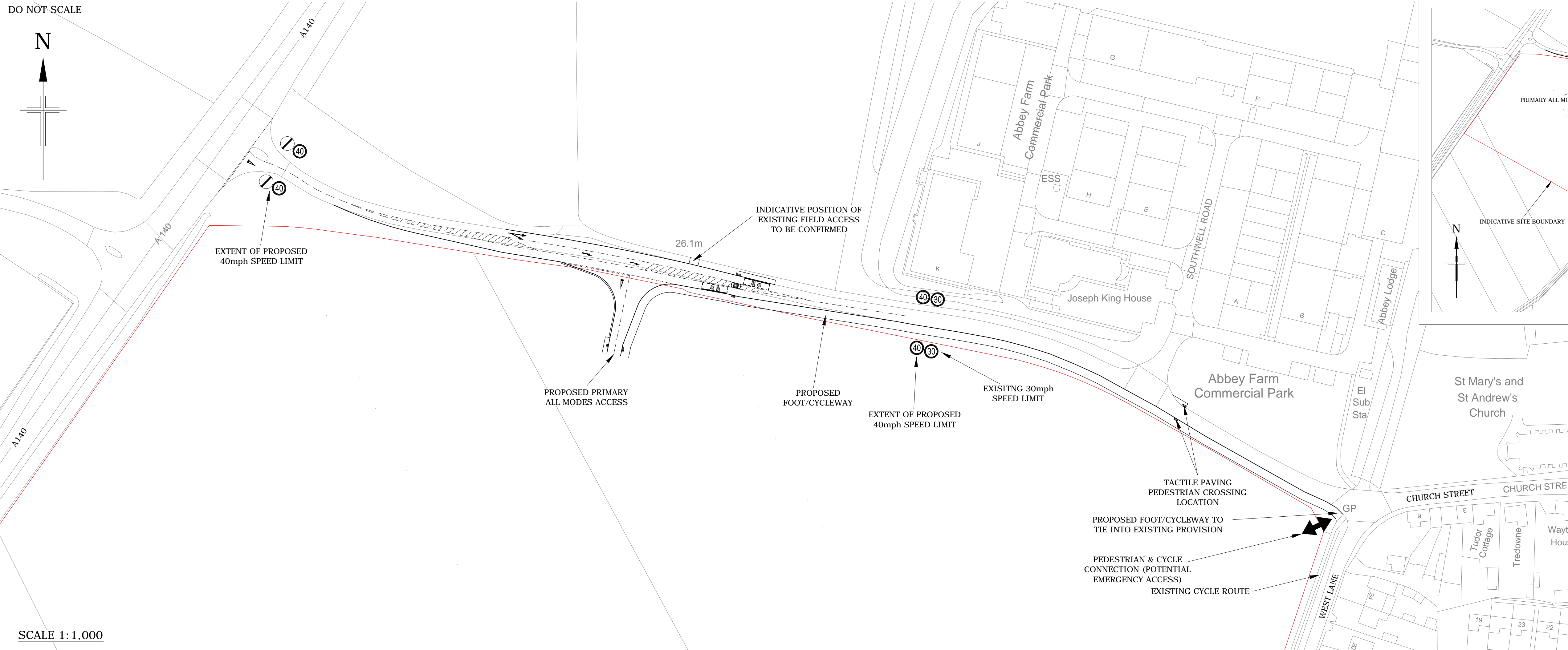
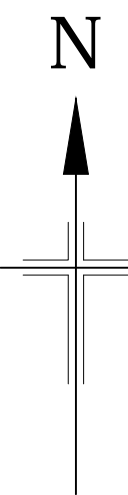
Site location grid reference 621185, 314970 and postcode NR10 3JU

Client: Abel Homes Ltd		Drawing Title: Site Location Plan	
Job Title: Land east of A140, Horsham St Faith	Date: 1.10.18	Job No: 49455	Dwg No: Fig. 1 (NTS)

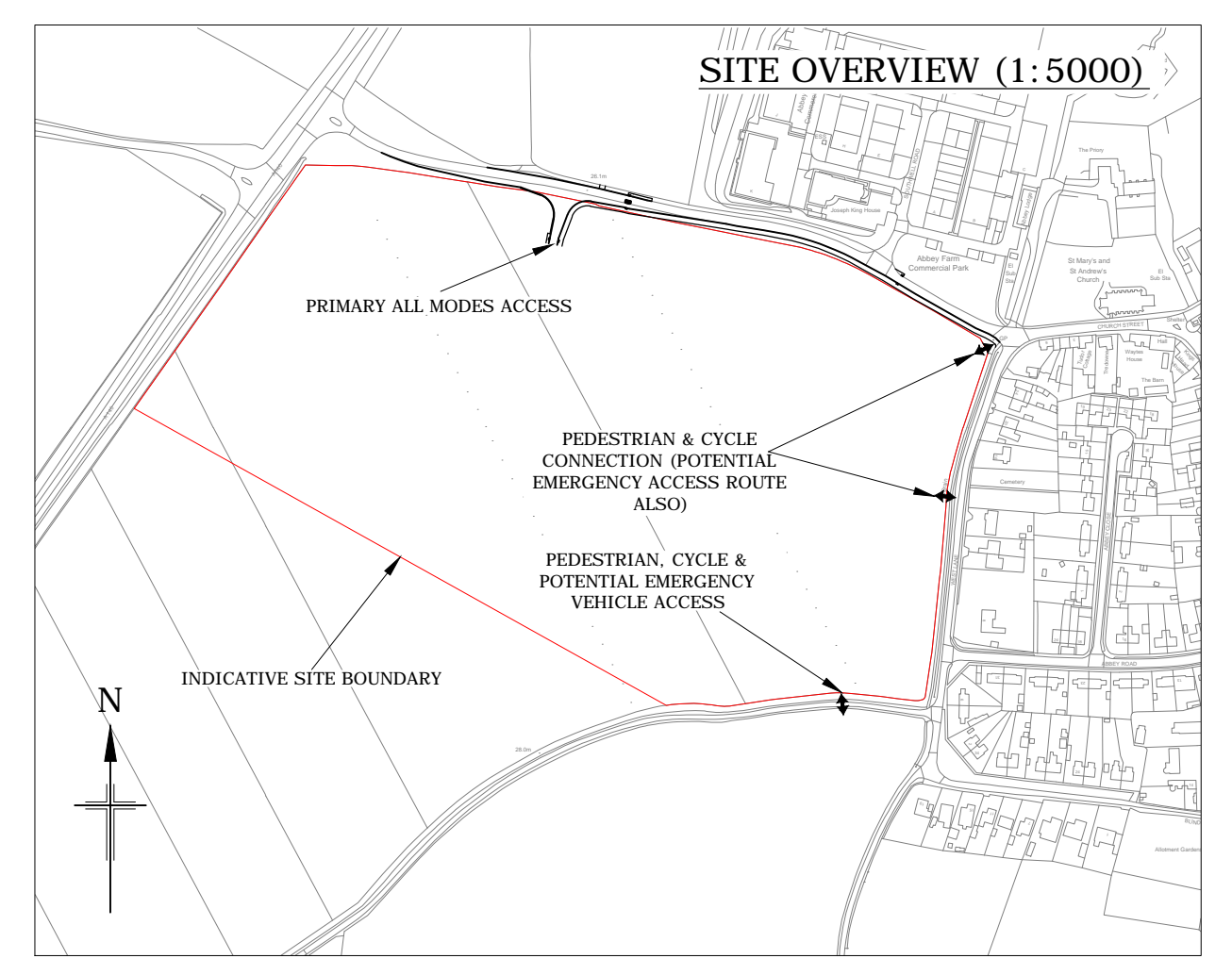


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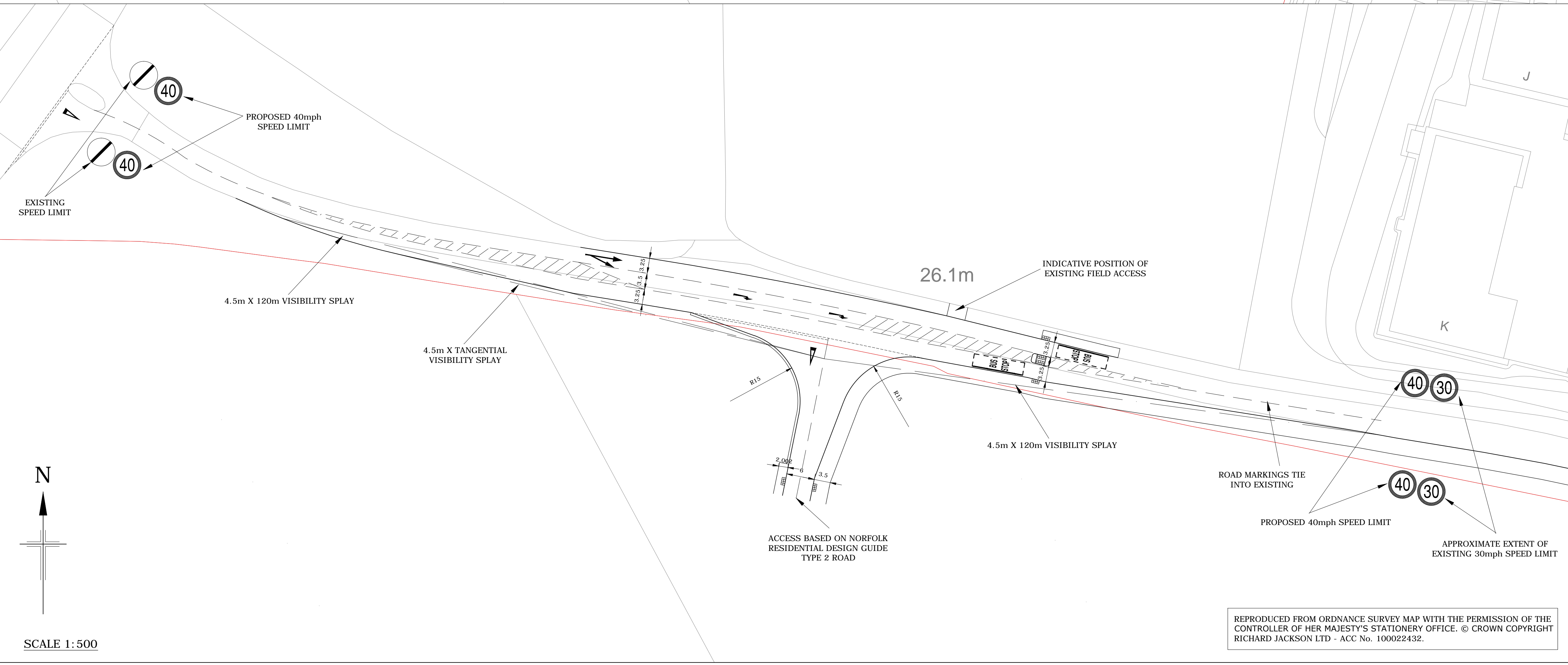


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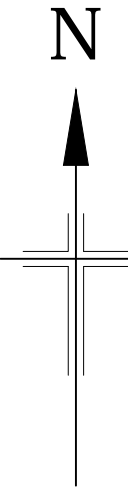


NOTES:

1. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE STATED. LEVELS ARE IN METRES ABOVE ORDINANCE SURVEY DATUM.
2. SELECTED ROAD MARKINGS SHOWN INDICATIVELY.
3. DESIGN BASED ON ORDINANCE SURVEY MAPPING AND SUBJECT TO DETAILED DESIGN AND SUBJECT TO ROAD SAFETY AUDIT.
4. HIGHWAY ACCESS DESIGN BASED ON TD 42/95 - GEOMETRIC DESIGN OF MAJOR/MINOR PRIORITY JUNCTIONS, BASED ON TRAFFIC FLOWS TAKEN FROM THE NORWICH NORTHERN DISTRIBUTOR AADT DATA AND UP TO A PROPOSED NUMBER OF DWELLINGS AT 400.
5. GHOST ISLAND LANE WIDTHS DESIGNED AS THE NORFOLK COUNTY COUNCIL STANDARD AT 3.25m RUNNING LANE AND 3.5m WIDTH FOR THE RIGHT TURNING LANE.



SCALE 1:500



REV	DATE	DESCRIPTION	DRAWN	CHKD
REVISIONS				

This drawing is to be read in conjunction with all other Engineer's drawings and all other project information. Any discrepancy between the Engineer's drawings and other project information is to be reported to the Engineer immediately.



Project
**LAND EAST OF A140
 HORSHAM ST FAITH**

Title
**PROPOSED SITE ACCESS
 (INDICATIVE)**

Client
ABEL HOMES LTD

Scale	Drawn	Date
AS SHOWN	D. PLAMER	05/10/18
Job Manager	Checked	Approved
M. DOUGHTY	MJD	MJD

Richard Jackson
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 The Wheelhouse, Bonds Mill, Stonehouse, Gloucestershire GL10 3RF Tel: 01172 020070
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Drawing No. **49455/PP/001** Revision

<input checked="" type="checkbox"/> INFORMATION	<input type="checkbox"/> APPROVAL	<input type="checkbox"/> COSTING
<input type="checkbox"/> TENDER	<input type="checkbox"/> CONSTRUCTION	<input type="checkbox"/> AS CONSTRUCTED

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